AMERICAN ARTISAN

Warm Air Heating

Residential Air Conditioning

Sheet Metal Contracting

January 1954
DIRECTORY NUMBER

See the yellow pages for Directory Section . . . . . .

CONTENTS . . . PAGE 4

NEW CATALOG

AIR CONTROL

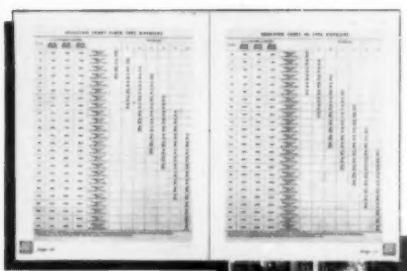
REGISTERS · GRILLES · DIFFUSERS



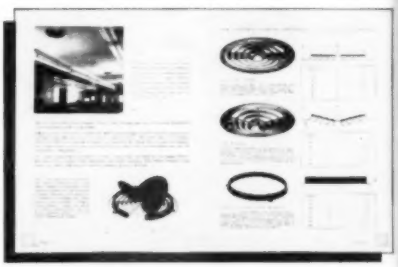


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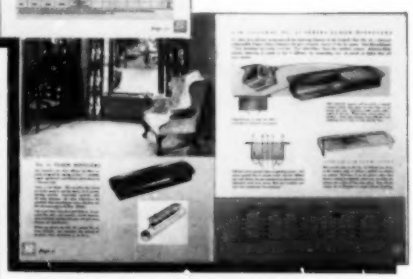


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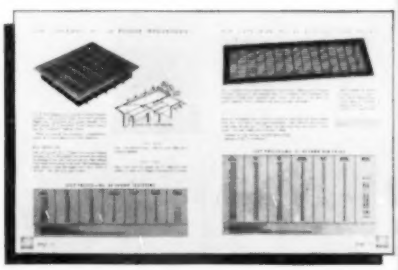


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DEPT. A

COOPERSVILLE, MICHIGAN

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SUNDSTRAND

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AMERICAN ARTISAN

JANUARY 1954

FEATURES

Nickel Bearing Steel Restrictions Lifted 39
Heat Needed for Outside Air Intakes 86
How to Add Cooling to Crawl Space Home 90
Merchandising Program Closes Many Sales 94
Four Zone Perimeter Heating 96
Economical Duct Layouts 98
Housing Census Heating Data 104
Reducing Slab Floor Losses with Edge Insulation 106
Shop Proves "Versatility Brings Success" 108
Repairing the Roof Over Our Head of State 110
Special Hood for Partly Round Tank 112
Selling Mechanical Cooling in Dry Climates 118
Reciprocal Licensing — a "Test Run" 121
Dealer Pays for Misrepresentations 128
1954 Directory Section of Warm Air Heating, Residential Air Conditioning and Sheet Metal Products (opposite page 280) 1d
Index to Advertisers 131d

CONVENTION REPORTS

Warm Air Convention Packs a "WHAM" 102
Heating Wholesalers Told "Cooling Good Business" .. 124

DEPARTMENTS

The Editor's Notebook 6
What's Happening 31
Washington Letter 39
Editorial: "Looking Ahead for '54" 85
Hugh Reid's Pattern Problem 112
Your Business and the Law 128
What the Associations Are Doing 202
Equipment Developments 206
New Literature 242
We Hear That 248
Appointments 264

Founded 1864

Volume 91 No. 1

WARM AIR HEATING

RESIDENTIAL AIR CONDITIONING

SHEET METAL CONTRACTING

Merged with American Artisan are "Warm Air Heating" and "Furnaces and Sheet Metals"

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the editor's notebook

Thumbing Through This Month's Artisan

. . .we find we can't always trust our hunches — especially where designing ductwork is concerned. It's obvious from Peter Franck's article, Economical Duct Layouts, that a casual guess as to which layout will cost the least is not always correct. A detailed analysis of different layouts may be in order. Three examples of such an analysis are given, in which the weight of the sheet metal duct (roughly proportional to the cost of installation) is the main consideration.

. . .but we find that the hunch of some heating dealers (which runs counter to the general belief) is being confirmed. These men have felt for a long time that air brought in through outside air intakes does not result in built-up air pressure inside the house to check infiltration—in fact, it adds to the quantity of heat the furnace has to supply! This has now been proved in experiments conducted at the University of Illinois. But how much more heat must the furnace supply in these cases? That's the important question which Guy Voorhees answers in his article, How Much More Heat Needed for Outside Air Intakes? Calculating the additional required furnace capacity involves estimating the volume of ventilation air to be introduced, determining the temperature of this air, then finding the additional heat needed by consulting a table given in the article.

. . .and we also note that many roads lead to sales. The Gogolin shop of Toledo, described in the article, Dealer Closes Many Sales, uses a combination of merchandising and selling approaches — and uses them successfully. Carefully arranged show room displays are valuable tools for the shop's salesmen, who can use such selling devices as the oil burner demonstration units set up along with the other displays. The shop employs three operators who make telephone calls (following a list of furnace owners) to obtain prospects for the company's furnace cleaning service. And of the average of 112 cleaning job customers a month, the company's salesmen are able to sell 20 on the advantages of buying a *new* furnace to replace the old one. To help them in their work, salesmen carry "before" and "after" photographs showing installations made by the firm. Also, novelties are given to customers and their children (leather folders to hold papers, penny banks, etc.) to remind them and their friends of the shop.



the editor's notebook

(continued)

. . .and we see some of the "ingredients" that go into the making of an expanding, successful sheet metal shop, described in the article, Sheet Metal Shop Proves "Versatility Brings Success." Mix one part carefully planned training program and one part company benefits (such as free employee parking and an employee cafeteria, to get a skilled staff motivated to work for the best interests of the shop. Combine this with the special tools such a staff develops to meet its own fabricating needs and with the great variety of sheet metal products it can produce. Result: The L. B. McConnell shop of Lansing, Mich., which has tripled in size in the last five years.

. . .and we also follow through the step by step so-

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A COMPLETE LINE OF STANDARDIZED PIPE, DUCT, AND FITTINGS FOR ALL TYPES OF RESIDENTIAL HEATING AND AIR CONDITIONING INSTALLATIONS.

Write for General Catalog 453, Perimeter Catalog 353

INDOOR COMFORT

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ADI STANDARDIZED FITTINGS

the editor's notebook

(Continued)

lution to our second cooling problem in the noteworthy series the Artisan is offering on residential air conditioning fundamentals. The article, How to Add Cooling to Home Built on Crawl Space, shows how an existing warm air perimeter heating system was modified to accommodate a 2 hp cooling unit — and, of course, we find out why that particular size of unit was chosen. Of special interest is the process for checking the adequacy of the heating ducts with respect to handling the air for cooling.

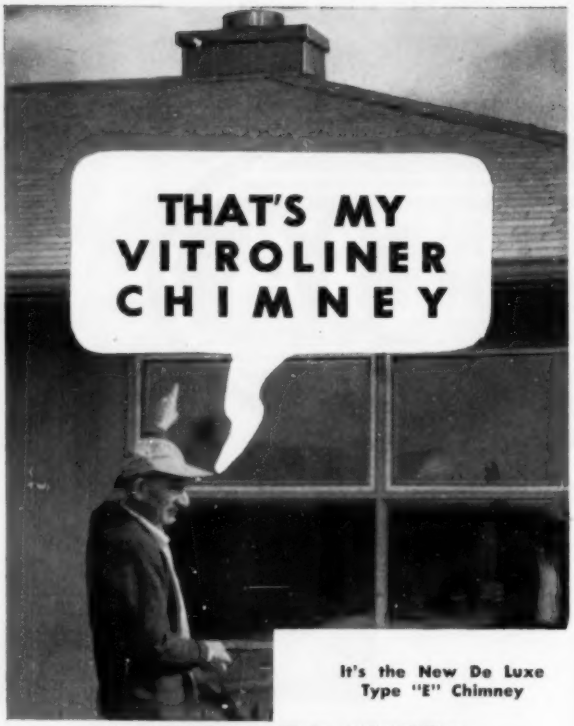
. . .and thumbing through the many other articles in this month's issue will provide much more on what's new in warm air heating, air conditioning, sheet metal work, selling and merchandising, and other important related topics.

Predicts 1954 To Be Good Business Year

SPEAKING on the subject of business in a growing America, Sinclair Weeks, Secretary of Commerce, recently told the National Association of Manufacturers that Americans have been earning more money and spending more money during the past several months than have a similar number of people anywhere in the world or in history.

This, he said, was due to the desire of the American people for self-betterment and the knack of Americans in developing and expanding a competitive enterprise system.

He pointed out that a century ago our entire output of goods and services, valued at present prices, was around $7.5 billion, compared to a production figure of close to



It's the New De Luxe Type "E" Chimney

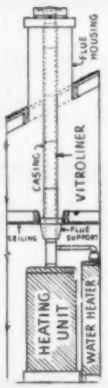
I BOUGHT THE LEADER!

"Naturally I'm proud and happy to be the owner of my new ranch house with a modern prefabricated Vitroliner Chimney," says Mr. H. Haynes of P.O. Box 142, Hinsdale, Ill.

"Our Vitroliner certainly looks smart and trim —and harmonizes with the architectural lines of the house. All the ranch houses in the neighborhood are different in style and color, but each has the same Vitroliner chimney. I like the way each chimney is painted the individual color of the roof. To me, that makes them beautiful as well as practical."

"Another good thing about Vitroliners I like— they're especially designed for all fuels. We use gas for heating and know we have a quality chimney we can depend on to do a good job."

Signed Homer F. Haynes



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- ELIMINATES CONDENSATION.
- QUALITY BUILT FOR LONG LIFE.
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"The Pioneer in the field."

CONDENSATION
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3511 W. POTOMAC AVE., CHICAGO 51, ILL.

the editor's notebook

(Continued)

$370 billion at the end of 1953. He predicted that 1954 would also be a good year. "This administration's program," he stated, "is to act so as to encourage private business to succeed and thereby to spread economic well-being to as many people as possible. Our program also is to act through legislative and executive enterprise so as to improve the lot of still more people."

Pointing to the steps taken by the government to encourage the growth of business, he said, "A climate favorable to business has definitely been established. Price, wage and material controls have been removed. Inflation has been checked, and the cost of living has gone up only 1.3 per cent since January and is leveling off. Excess profits taxes have been scheduled to end and income taxes to drop 10 per cent. Other tax changes will be of a constructive nature."

"Business confidence in the administration," he concluded, "has helped make 1953 the most prosperous year on record—and there is every prospect of another good year in 1954."

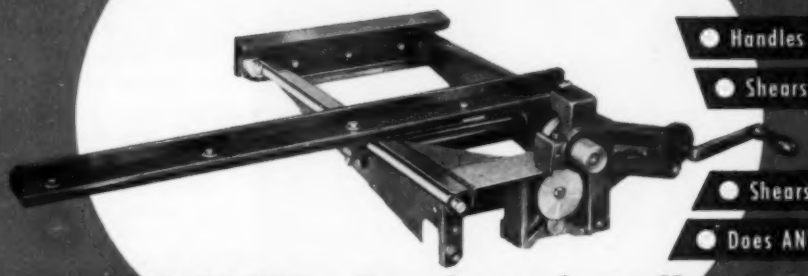
Says New Construction Will Continue High

SALES of heating equipment will continue at high levels for the next several years if new construction predictions made by officials of the National Association of Home Builders prove to be accurate.

According to Emanuel M. Spiegel, president of the association, new home production for 1953 was estimated at about 1,100,000 units, with a combined value of nearly $12 billion, and in 1954 the number of new housing starts is expected to

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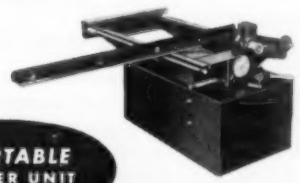
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THE LOCKFORMER CO.

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the editor's notebook

(continued)

run very close to that level. "We are hopeful," he said, "that legislation now under preliminary discussion in Washington will strengthen our existing mortgage finance machinery and provide the additional mass market financing tools that are needed. One of the gravest handicaps faced by the home building industry in 1953 was the acute and prolonged shortage of mortgage money, particularly for middle income families who tried to buy new homes on low down payment loans insured or guaranteed by the Federal Housing Administration or the Veterans Administration. However, there were definite signs of improvement in that situation in the closing months of the year and there are good grounds to hope that mortgage money will be available for every family that seeks a new home within its means during 1954."

John M. Dickerman, executive director of the organization, says: "In my judgment, there is no shadow of doubt that there is and will continue to be a real need for at least 1 million new homes a year. And that need will increase in the early 1960's, when the big crop of 'war babies' born during the 1940's will be coming to maturity."

The Washington Letter, published by NAHB, points out that a steady veteran market may be expected. "According to a Federal Reserve Board survey made in 1953," it says, "almost half of all families expecting to buy homes were veterans. Those who were unable to buy last year, due to the mortgage money shortage, will be potential buyers in 1954, together with many thousands of additional veteran families coming into the market each year."



The industry's most advanced quality forced-air furnace

. . . designed to eliminate service problems

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. . . designed to make customers happy

And—who wouldn't be happy with the Royal Jet-Aire! It's quieter, safer, gives many *extras* in heating comfort. Available in 75,000, 85,000 and 105,000 BTU input capacities, the Royal Jet-Aire also comes in a counter-flow model of 85,000 BTU input capacity. Without a doubt, the TALL RED is today's greatest furnace value.

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ALHAMBRA, CALIFORNIA
Formerly Royal Heaters, Inc.
Manufacturers of a complete line of quality heating equipment.

the editor's notebook

(continued)

Sees 1954 a Tougher Selling Year

IN A RECENT talk to members of the Wire Association, Leslie B. Worthington, president, United States Steel Supply Div., United States Steel Corp., pointed out that while we are undoubtedly entering a period of tougher selling than we have known for some time, the market — from the standpoint of number of customers — is better than it ever has been. "We are in the middle of a population boom that shows no sign of simmering down," he said. "By 1975 we will set a 'fifth plate' for every four persons now sitting down to the dinner table. This requires increased cattle production. To supply this much food, every five acres of land must produce as much as six acres today — creating a tremendous demand for more tractors, farm fence, baling wire, poultry netting and hundreds of other farm products. Millions of new houses, telephones, railroad passenger cars and freight carriers will be needed."

Speaking of the more immediate future, Mr. Worthington said that increased emphasis must be placed upon selling. "At United States Steel Supply," he said, "we want our salesmen rugged and ready for the competitive period ahead. Since there is and will be more steel readily available, we are going to have to work harder to sell it. But steel is going to be sold. For the sellers it means sticking to a strict training schedule with regular workouts in initiative, imagination and resourcefulness. Above all, it means we will re-emphasize the important philosophy of service to the customer. For the customers it means quicker deliveries, bet-



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It is new and radically different, not merely because of its method of manufacture but because of its new and long-sought qualities and characteristics unachieved in the past by any other process.

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Commercial Quality and Drawing Quality in gauges No. 18 to 30, widths 24″ to 36″ and lengths 72″ to 168″, Wheeling "SofTite" Galvanized Sheets meet the complete range of sheet steel requirements for the fabricating industry. Users of "SofTite" Galvanized Sheets have acclaimed them the ultimate continuously coated galvanized sheets.

Working sample available. Call or write nearest warehouse.

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Wheeling, West Virginia

Atlanta Boston Buffalo Chicago Columbus Detroit Houston Kansas City
Louisville Minneapolis New Orleans New York Philadelphia Richmond St. Louis



the editor's notebook

(continued)

ter steel products and more information. America was built on this kind of a market — a buyer's market."

Steel Shipments Reach New High

STEEL product shipments in the first nine months of 1953 totaled 61,848,324 tons, the American Iron and Steel Institute reports. This is about 14,611,000 tons more than in the same part of 1952 and the highest tonnage ever attained in a comparable period. The total exceeded the previous record, set in the first nine months of 1951, by over 2.9 million tons. In 1952 the long strike held down the shipments.

Book Gives Data on Hospital Ventilation

OF PARTICULAR interest to ventilation specialists is the chapter on ventilation and air conditioning in the recently published Planning Guide for Radiologic Installations. The book includes information related to the design, construction or remodeling of departments of radiology in hospitals and private offices. The author of the chapter on ventilation points out that obnoxious odors are a special problem of hospital departments of radiology — particularly body odor, which is most noticeable in closed fluoroscopic rooms devoid of adequate air conditioning. This problem is solved by adequate control of temperature, humidity, and air movement. Odors also arise from the film processing solutions, and their disposal should be considered. Yearbook Publishing Co., 200 E. Illinois St., Chicago, is distributor of the book, which is priced at $8.00 a copy.



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All Electric
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the editor's notebook

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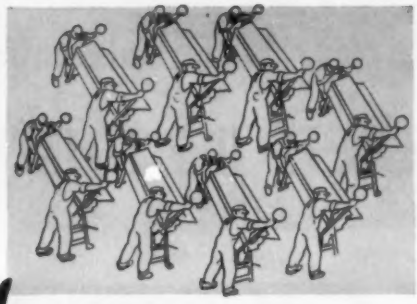
SBA Joins Forces with Commerce Department

COOPERATIVE arrangements to strengthen government assistance to small business and to prevent duplication of activities in that field were recently announced by the Department of Commerce and the Small Business Administration. Under this program, the Department of Commerce will make available to SBA, for further dissemination to small business, the business information, statistics and advice compiled by the Department of Commerce and its specialized industry, commodity and other operating divisions. SBA, in turn, will inform the Department of Commerce of the results of its operations and activities with small business, particularly in the field of procurement assistance and loans, so that plans and policies can be developed to promote the economic growth of business throughout the country and at the same time contribute to its stability.

Pig Iron Production Hits 10-Month High

IRON is a "family" of metals manufactured in 236 standard grades of chemical compositions in the steel industry's blast furnaces, according to the American Iron and Steel Institute. In the first 10 months of 1953 over 63.2 million tons of pig iron, excluding blast furnace ferroalloys, was produced. This was a 10-month record, and was over 4.5 million tons above the highest previous output in the first 10 months of 1951. Of the 61.5 million tons of pig iron made in 1952, more than 53 million were used by the industry in the manufacture of steel, and nearly 2 million tons were put to other uses in steel plants.

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Also see page 9

THE LOCKFORMER CO.

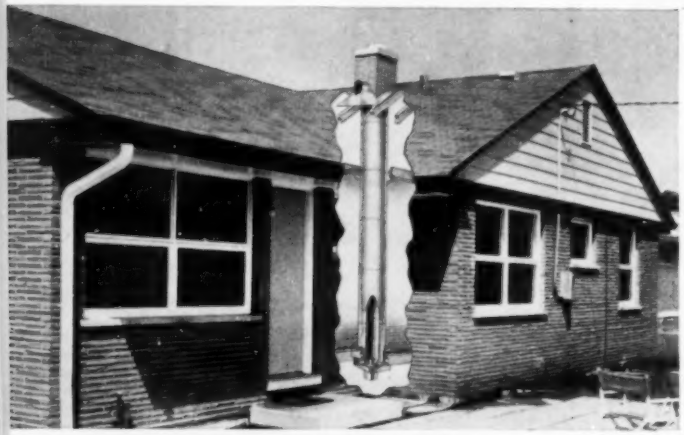
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APPROVED FOR ALL FUELS — Listed for coal, oil and gas with all home heating plants and incinerators by U.L., F.H.A. and all major building codes. Acid-proof fire clay tile lining; 3" vermiculite concrete wall; and acid-proof, leak-proof joint cement withstands temperatures in excess of 2000° F. Insulating value equals 24" brick construction. So safe that no clearance to wood construction members is necessary.

QUICKLY INSTALLED — Complete chimney assembled in three man hours or less. Easily installed even after house has been completed. Construction delays eliminated. Complete packaged chimney, with nothing else to provide, delivered to job when needed.

LOW COST — Saves 30% to 50% on time and material over brick chimney construction.

FREEDOM OF DESIGN — Due to its lightweight sectional construction, the Van-Packer Chimney may be suspended directly over furnace where it best serves heating plant location.

EFFICIENT, PERMANENT — In comparative performance test the Van-Packer Chimney developed 34% more draft than standard code tile-lined brick chimneys. Not a temporary metal pipe, but a lifetime masonry chimney.

BRICK-PANEL CHIMNEY HOUSING — Cement asbestos housing panels are deep embossed in brick texture; finished brick-red with natural color mortar lines. Embossed brick texture permits easy repainting, if desired, to match other colors without covering mortar lines. Housing measures 16½" wide by 24" deep. Pre-drilled, knocked down panels cut and assembled on the job to fit any roof ridge or pitch. Aluminum housing also available.

IMMEDIATE DELIVERY — Distributed in the United States, Canada and Alaska through local heating and building material jobbers. See next page for simple ordering instructions.

VAN-PACKER CHIMNEY INSTALLATION TIME – 3 MAN HOURS OR LESS



Cut holes in floor, ceiling and roof. No clearance to wood members necessary.



Nail chimney support in place. Cement first 24" chimney section in support.



Cement remaining sections in place until desired height is reached.



Cut housing panels to desired roof ridge or pitch. Assemble with corner angle irons provided.



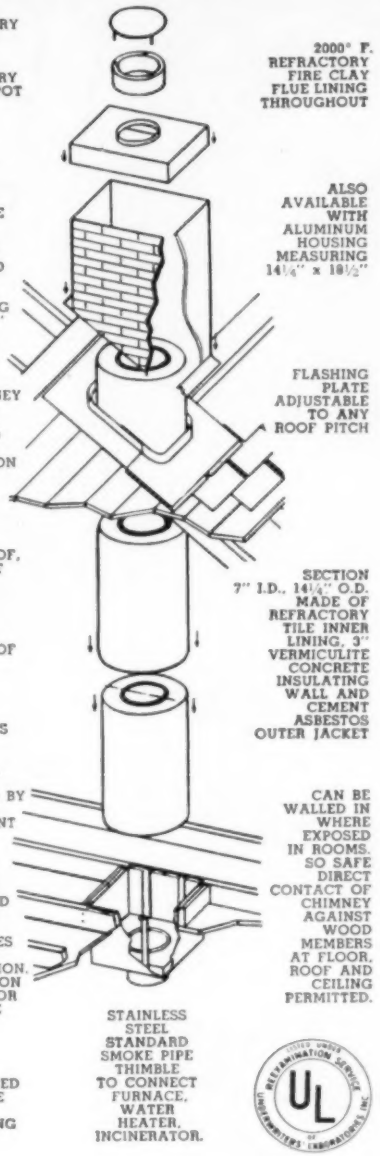
Install leak-proof flashing. Fasten housing in place.



Install housing cap. Set chimney pot with joint cement. Rain cap available if needed.

. . . plus "buyer acceptance" of brick!

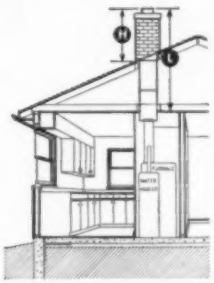
CEILING SUSPENDED INSTALLATION METHOD



Write for Bulletin No. 3A — AF23

INSTALLATIONS FOR EVERY HOME – FOR EVERY FUEL

CEILING SUSPENDED



One or Two Story No Basement

FLOOR SUSPENDED



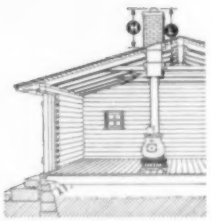
One or Two Story with Basement

PIER FOUNDATION SUPPORTED



One or Two Story with Basement

CEILING SUSPENDED



Cabin, Garage or Farm Building

HOW TO ORDER VAN-PACKER CHIMNEYS

For exact quotations and ordering information simply give your heating supply or building material dealer or jobber the "H" and "L", or "H" and "P" measurements as indicated in diagrams above. See your local classified telephone directory for Van-Packer listing. If no distributor is listed write Van-Packer Corp.

COMPLETE INSTALLATION INFORMATION AVAILABLE

Specification detail sheets in the scale of ½" = 1'-0" or ¾" = 1'-0" are available from Van-Packer Corp. on request. If the type of chimney installation you require is not shown here, send an elevation drawing showing roof pitch and chimney location to Van-Packer Corp. Complete installation information will be sent you immediately.

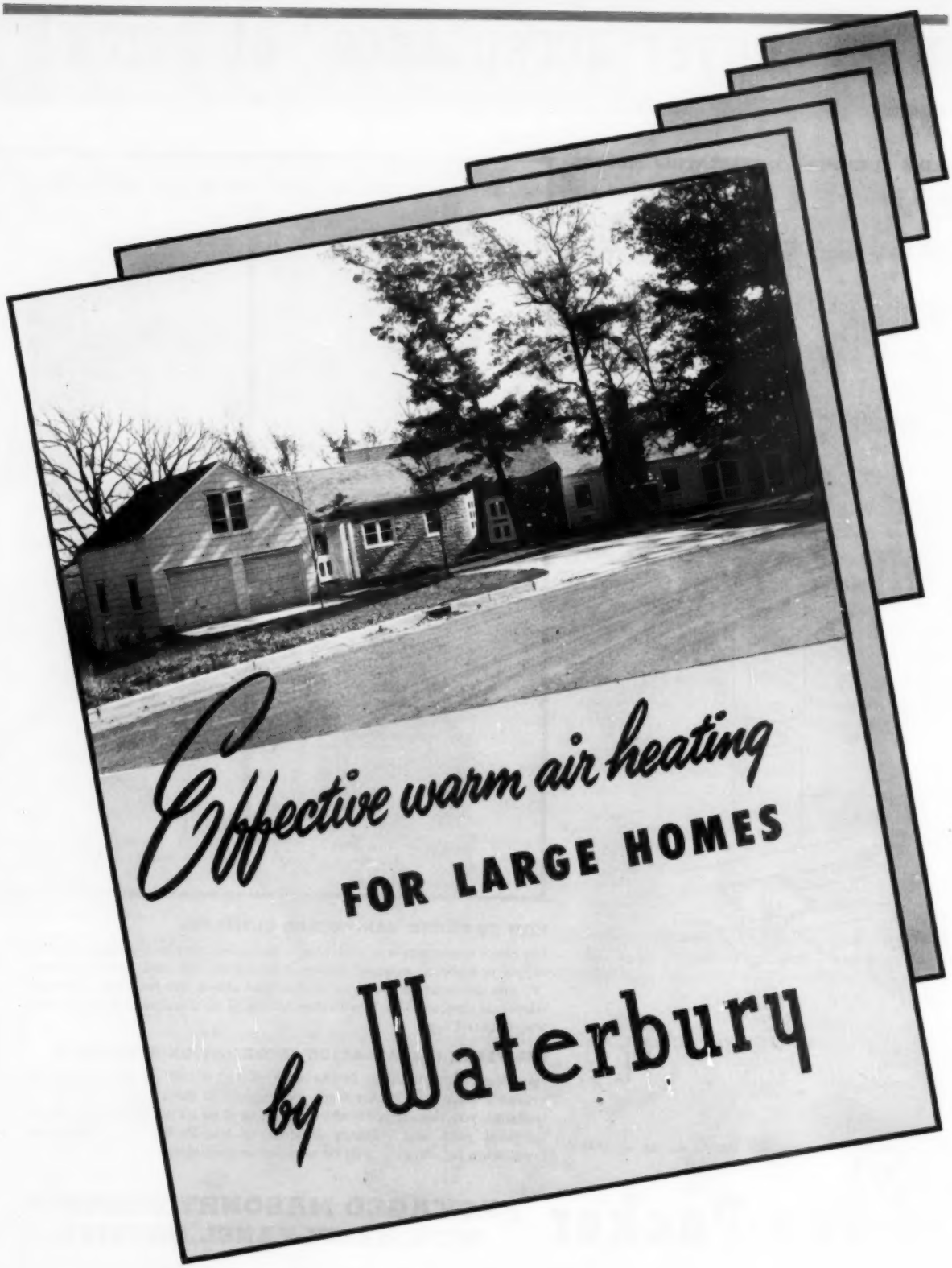
Van-Packer

PACKAGED MASONRY CHIMNEY WITH BRICK-PANEL HOUSING

Van-Packer Corporation — 209 S. La Salle St. — Chicago 4, Illinois — Phone: CEntral 6-9892 — Cable: VANPACK, Chicago

Manufactured and distributed in Canada by C. A. McRobert and Son, Ltd., St. Laurent, Quebec.

Keep up with the literature



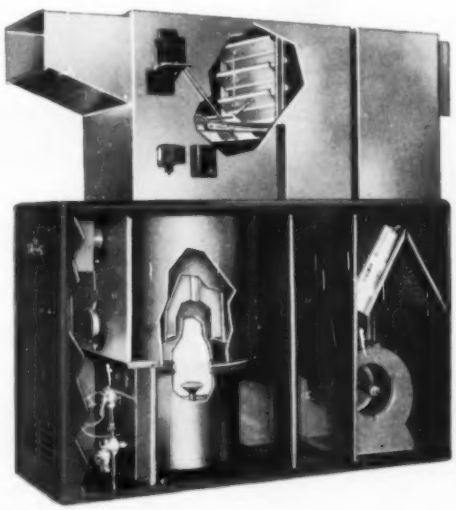
your customers are reading

Every day, from all over the country, letters of inquiry keep coming in to the Inquiry Service Department of the Waterman-Waterbury Company. They come in response to our national advertising campaigns, to publicity placed in the Home Planning Kit that is going to some 80,000 home planners this year, and to the prompting of builders and architects and of friends who own a Waterbury furnace or winter air conditioner. How well are YOU prepared to answer the questions of a prospective customer about the Waterbury line? What will you say to your customers when they insist on zoned heating?

When they demand ZONING...

The Waterbury Comfortrol system of zoned heating provides customer satisfaction.

Zone control is the latest trend in home heating. With zoned heating a uniform temperature can be maintained throughout the house or different temperatures in different parts of the house. *Many* Waterbury units will provide zoned heating *without any changes; all* Waterbury units *can be adapted to it.* The complete Waterbury line of quality furnaces, air conditioners and conversion burners includes units to satisfy the requirements of any customer. All furnaces and air conditioners are guaranteed for ten years.



Comfortrol By-Pass systems can be installed in various combinations. Shown here is a typical installation.

The Bonderite seal on every Waterbury unit means protection against corrosion and rust; another Waterbury feature.

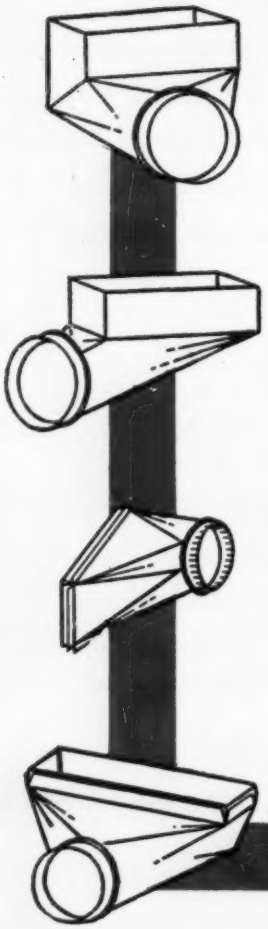
The Waterman-Waterbury Co.

OVER 47 YEARS OF WARM AIR HEATING

1122 JACKSON ST. N. E. • MINNEAPOLIS 13, MINN.

This Year, Costs Must Be Kept Down!





One of the top industrial counsellors of the nation has put the 1954 prospect this way: "1954 will be what you make it" . . . . . and we feel that he is right.

The contractor who watches his costs and uses materials and methods that produce the utmost results will come out on top and with PROFIT.

OUR contribution toward keeping your job costs at a minimum is the super-accurate construction of every piece of

HANDY PIPE

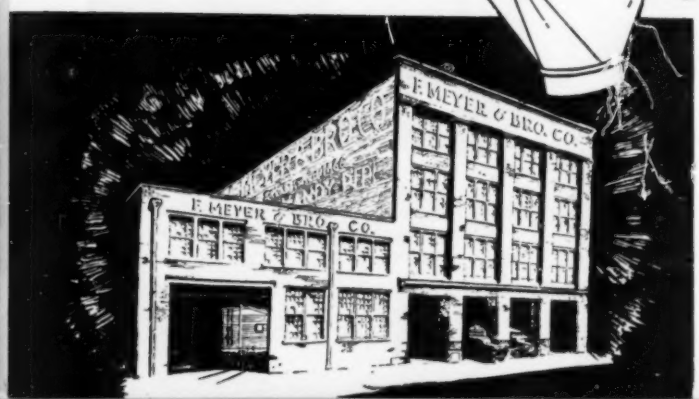
Our designs — our engineering — our workmanship and our shipping service are all directed toward the objective of *better standardized fittings that go together quickly and easily.* That means *more installation accomplishment per day* . . . . . and that means *lower costs per job!*

We say emphatically: In 1954 you can't do better than to look to THE HANDY PIPE PEOPLE for your

Distribution Fittings Of Every Form For All Types Of Warm Air Heating And Residential Cooling Systems.



If You Do Not Have Our Catalog No. 53, a Request Will Bring It.



F. MEYER & BRO. CO.

PEORIA, ILLINOIS

AIR DISTRIBUTION INSTITUTE ADI STANDARDIZED FITTINGS MEMBER

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HIGH EFFICIENCY **HI-CAP** (HIGH CAPACITY) STEEL FURNACES

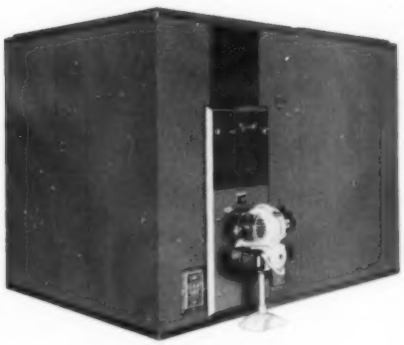
FOR COMMERCIAL AND INDUSTRIAL HEATING
FROM 330,000 TO 1,000,000 B.T.U. OUTPUT

Using All Fuels

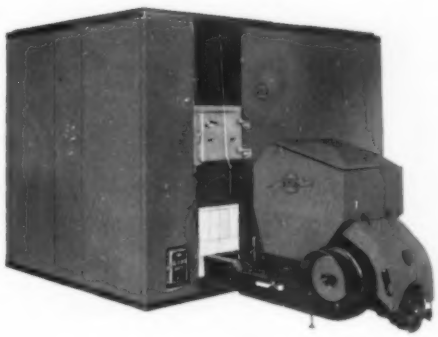
OIL • GAS • STOKER • HAND-FIRED

Designed expressly for
SCHOOLS
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GARAGES
PUBLIC AND COMMERCIAL BUILDINGS

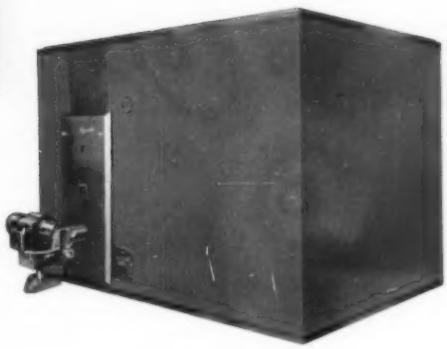
Syncromatic **COUNTER FLOW**



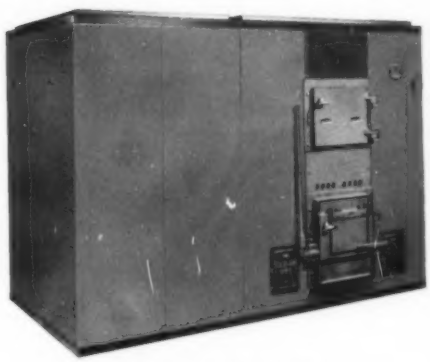
O F B OIL-FIRED



C F B STOKER-FIRED



G F B GAS-FIRED



C F B HAND-FIRED

Syncromatic Corporation

WATERTOWN WISCONSIN

Your MOVE SIR!



Every Move A *Winner!*

You may not be a champion at checkers, but when it comes to warm air heating you can have the jump on them all with Syncromatic's complete line of warm air furnaces.

Capacities

From 60,000 to 1,000,000 B.T.U,s.
FOR OIL, GAS OR COAL

WRITE OR CALL

Syncromatic Corporation

WATERTOWN, WIS.

FOR THE FIRST TIME!

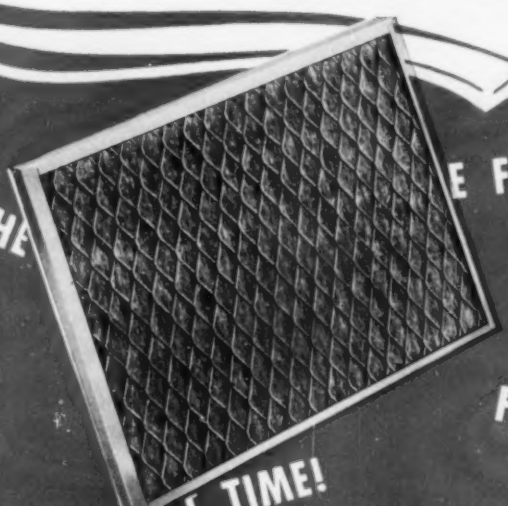
FOR THE FIRST TIME!

FOR THE FIRST TIME!

A-LUM-O-AIRE

PERMANENT FILTER

is available to the domestic market





FOR THE FIRST TIME!

FOR THE FIRST TIME!

FOR THE FIRST TIME!

FOR THE FIRST TIME!

FOR THE FIRST TIME!

FOR THE FIRST TIME!

FOR THE FIRST TIME!

A-LUM-O-AIRE is a permanent "dry" type air filter designed for top efficiency in all forms of air conditioning and ventilating equipment. It is of all-metal construction and is completely rustproof and fireproof. No oils or adhesives are required. Frames are of aluminized steel with welded corners for extra strength. Mat retainers are made from heavy-gauge expanded steel and plated after cutting to size.

The filter media is ALUMO Aluminum wool consists of continuous strands with no short fibers. In a 20 x 20 x 2 filter there is an area of over 59 square feet with millions of tiny barbs which effectively catch and hold the dust. When dirty, A-LUM-O-AIRE is easily cleaned by flushing with cold water. It is designed to last the life of an ordinary furnace. A-LUM-O-AIRE filters are available in all standard 1" and 2" sizes. Special sizes can be made to order. Copper-wool filter media with copper-plated mat retainers are also available. A-LUM-O-AIRE filters can be loaded with the proper filter media to meet any specific requirement.

Wherever quality performance and permanance is desired, you'll find the installation of A-LUM-O-AIRE filters pay off in satisfaction and economical maintenance cost.

Manufacturers Agents, Sales Representatives and exclusive distributorship inquiries are invited. This is an opportunity to get in on the ground floor with a product they ask for today and will demand tomorrow. Sales and advertising helps to meet local requirements.

METAL WOOL DIVISION OF

CAREY ELECTRONIC ENG. CO.

SPRINGFIELD, OHIO



THE HEATING DEALER with LOW SERVICE COSTS...

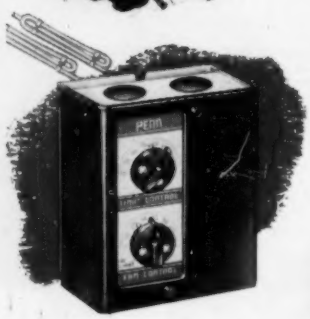
who is he?

what's his secret?

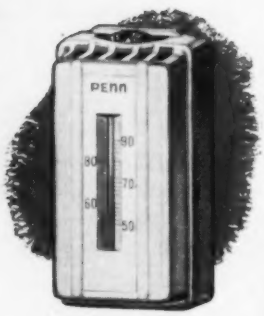
If you're installing Penn heating controls . . . you know the answer to both questions. If you're not . . . then use Penn on your next heating job and *you'll be the heating dealer with low service costs!*

Once Penn controls are installed properly, their dependable performance eliminates costly service call-backs. Just as important, their accuracy *delivers* the better heating comfort you sell. Result . . . better-satisfied customers, more sales and more profit for you!

Want convincing proof? Then, install Penn controls on your next heating job. Ask your burner manufacturer or wholesaler. **Penn Controls, Inc., Goshen, Indiana.** Export Division: 13 E. 40th Street, New York 16, N. Y., U.S.A. In Canada: Penn Controls Limited, Toronto, Ontario.

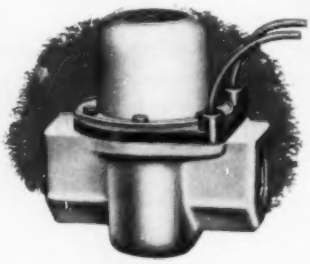


Liquid expansion furnace fan and limit control with calibrated dials. Also available for hot water systems.



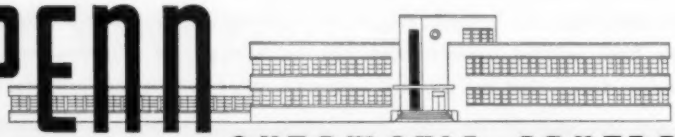
Heat-anticipating, 2-wire thermostat banishes Hot-n-Cold living for real heating comfort.

Here's a new type of gas valve with straight-through flow and vertical, self-cleaning seat.



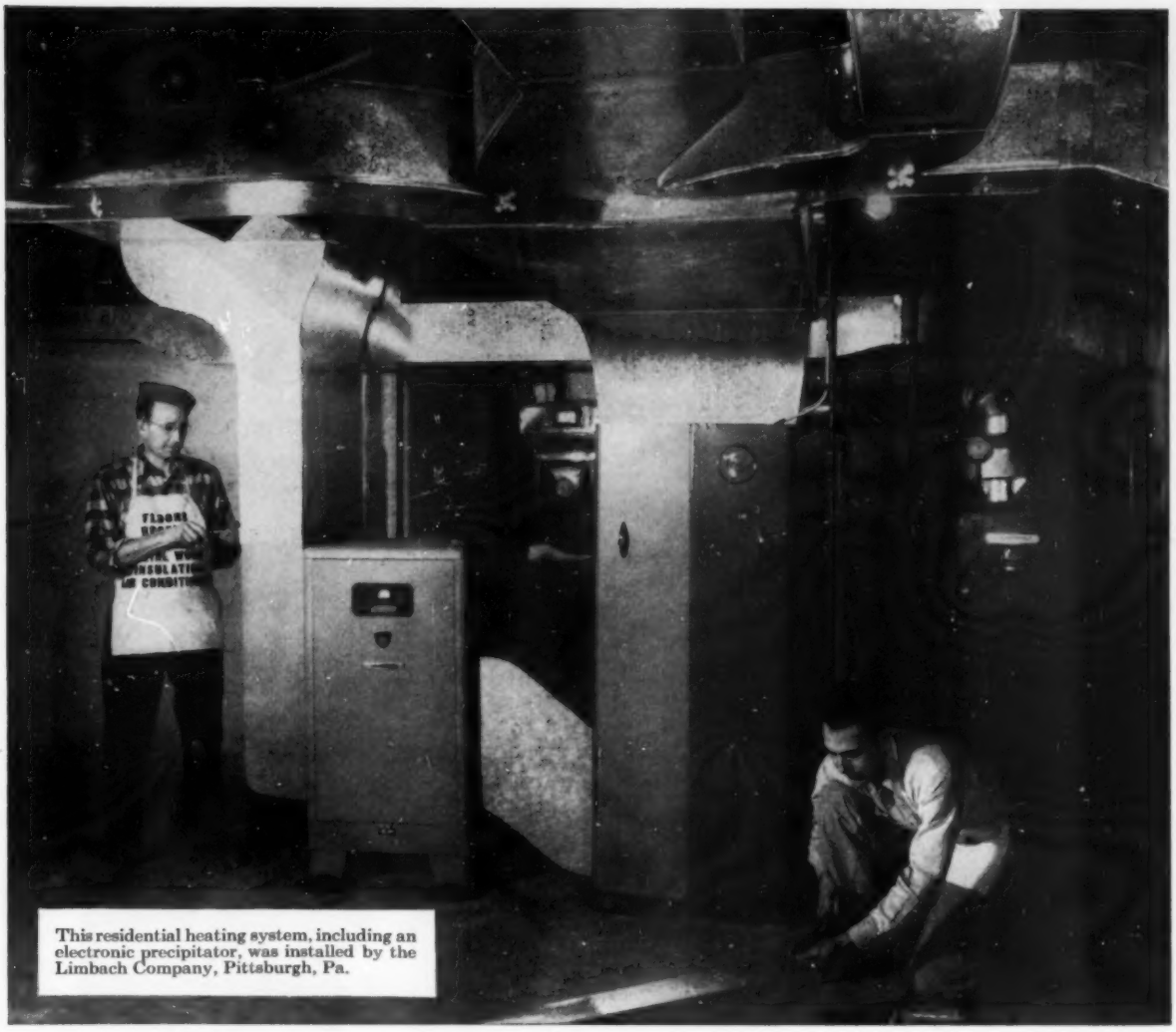


Oil burner stack switch with low voltage protection, simple 2-wire hook-up and sturdy bimetallic element.



AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES



This residential heating system, including an electronic precipitator, was installed by the Limbach Company, Pittsburgh, Pa.

For tricky remodeling jobs . . . U·S·S Galvanized Steel Sheets

NEAT seams, tight joints and quality workmanship—on all sorts of new or modernization residential heating jobs—call for good sheets that handle easily, work up nicely. U·S·S Galvanized Sheets are uniform in ductility, flatness and surface finish; they make it easy to handle difficult shapes and angles on residential jobs like the one shown here.

You can bend, roll, cut or stamp these steel sheets in minimum time with satisfactory results. Soldering is no problem. And their tightly adhering zinc coating is highly resistant to cracking and flaking, assuring a long-lasting finish that contributes to the pleasing appearance and quality of every job you turn out.

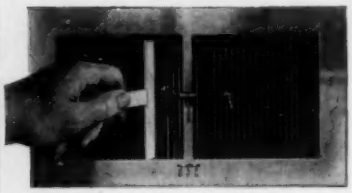
U·S·S Galvanized Sheets are one of the best-known, most widely-used sheets in the industry. And the U·S·S trade-mark is your assurance of continuing dependable quality. Your customers know and appreciate the U·S·S name. It will pay you to take advantage of this widespread customer acceptance by using U·S·S Galvanized Steel Sheets on all your jobs.

UNITED STATES STEEL CORPORATION, PITTSBURGH • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS, COAST-TO-COAST
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S GALVANIZED STEEL SHEETS

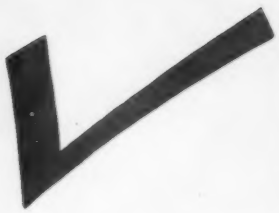
3-470

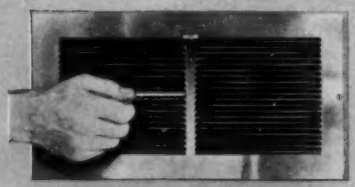
UNITED STATES STEEL



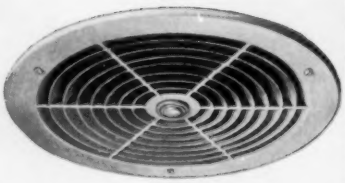
No. 75 For Air Conditioning at its best. The only register with the INCOMPARABLE TURNING BLADE VALVE.

H&C





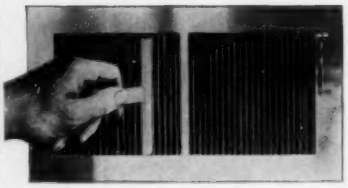
No. 74 A low-cost, high quality Air Conditioning Register to meet price competition without sacrificing customer good will. No. 740 available in large size grilles, up to 36" x 36", as No. 740H and 740V.



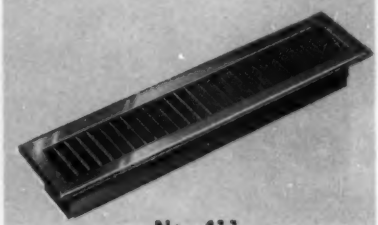
H & C CEILING DIFFUSER — neat, trim and efficient. Available in 5 popular sizes.



No. 40 "DIFFUSAIRE" — the only really practical Sidewall Register for perimeter heating. No. 4 Frame with No. 401 Diffuser constitutes an ideal two-piece out-of-wall installation.



No. 76 Air Conditioning Register has Multi-Shutter valve, flexible fin face. Particularly suited to shallow ducts.

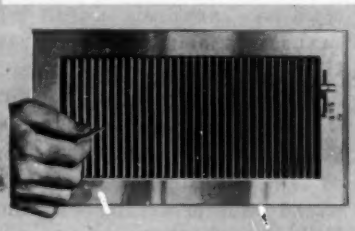


No. 411

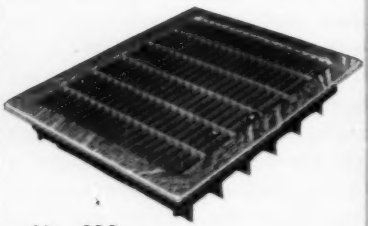
"DIFFUSAIRE" — provides unmatched efficiency and control of air distribution in floor installations for perimeter heating.



No. 130 Baseboard Register—tops for gravity or conversion jobs. Companion Sidewall Register — No. 330.

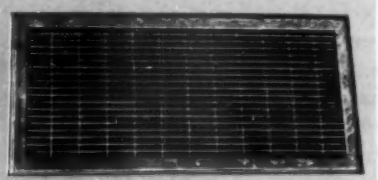


No. 88 Air Conditioning Multi-Shutter Registers and Grilles. Adjustable bar face. Available in standard sizes through 30" x 24".



No. 210

"NO-FLEX" Floor Register — close mesh, exceedingly sturdy, one-piece margin, attractive appearance.



No. 265 "NO-FLEX" Return Air Intake — matches the No. 210. Large Free Area.

HART & COOLEY

Check

THE EXTRAS YOU GET WHEN YOU DEAL WITH HART & COOLEY

Extra QUALITY— H & C products, in any class, are tops in efficiency, perfect functioning registers of the highest quality construction and workmanship known to the industry.

Extra CONVENIENCE— When you deal with H & C, you buy from the source that offers the most complete line — an ideal register for every type of installation. Each item is individually packed and shipped in sturdy containers in quantities small enough to be easily handled.

Extra PROFIT— Customer satisfaction means greater profit. With H & C, you offer the finest registers available, and can count on customer satisfaction and added patronage.

Extra SATISFACTION— All through its history, H & C has been noted for extending whole hearted cooperation on even the smallest orders. Providing the best service possible is a matter of pride with H & C. When you deal with H & C, you can be assured of full, all-around, satisfaction.

OUR CURRENT CATALOG, *No. 52, shows our complete register line as well as such furnace accessories as Manual Furnace Regulator Sets, Damper Regulator Sets, Damper Clips and Tips, Warm Air Dampers, Furnace Pulleys, Chain and Casing Clips. If you do not have a copy, write for one today.*

MANUFACTURING CO. 500 EAST EIGHTH ST., HOLLAND, MICHIGAN

IN CANADA: HART & COOLEY MANUFACTURING CO., FORT ERIE, ONTARIO

WORLD'S LARGEST AND MOST PROGRESSIVE PRODUCERS OF REGISTERS AND GRILLES.



MICROMETER ACCURACY

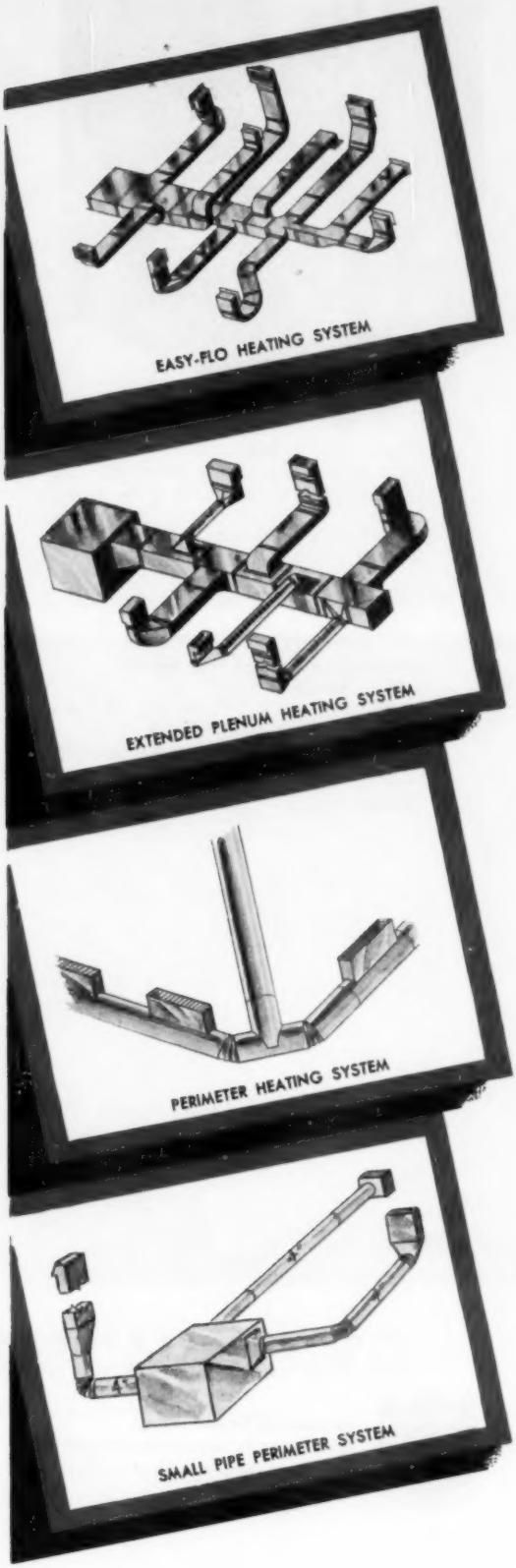
Cincinnati sheared blanks are accurate. Only accurate blanks insure accurate economical forming and low cost assembly.

Write for Cincinnati Shear Catalog S-6.

THE CINCINNATI SHAPER CO.

CINCINNATI 25, OHIO, U.S.A.

SHAPERS • SHEARS • BRAKES



JUSRITE

PREFABRICATED DUCTS AND FITTINGS

. . . engineered for fast assembly

. . . cartoned for quick handling

Jobber and installer alike find that *JUSRITE* prefabricated fittings help build profits. Prefabrication means fewer jobbers' inventory headaches . . . and the precision fit of *JUSRITE* fittings speeds assembly.

***JUSRITE* ducts and fittings are made right . . . cartoned right . . . priced right. Fittings are available to meet every heating need. Sold through leading jobbers in principal cities. Contact us for location of your nearest supplier.**

CORBMAN BROS.

Manufacturers

25th and York Streets
Philadelphia 32, Pa.

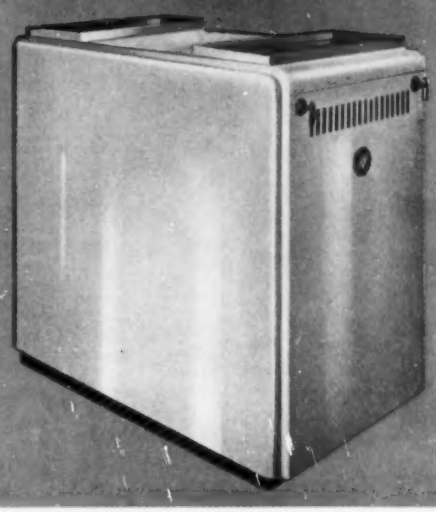
there's a dependable **RICHMOND** furnace for every warm air heating need

fully automatic gas- and oil-fired types



NEW SH-P for Oil; SH-G for Gas—
Winter Air Conditioners—Steel, Horizontal
Capacities—SH-P; 80,000 to 212,000 btu/hr. output at bonnet
SH-G; 85,000 to 220,000 btu/hr. input. Five sizes—for every need. Ideal for split-level homes.

GHA—Gas-Fired Winter Air Conditioner—Cast-Iron, Horizontal
Capacities—input btu/hr.: single—66,000 to 140,000; double—180,000 to 280,000.
Deluxe basement type—cast-iron heating element for long life—finest quality controls.



free bulletins available

Descriptive literature including pertinent technical details, rough-in dimensions, etc. has been prepared in bulletin form for each of these units. For copies, use the handy coupon or write.

All Richmond furnace casings "Duridized*" for superior bonded finish
**Duridine—American Chemical Paint Co.*



SU-30-G, SU-35-G; Gas-Fired
SU-30-P, SU-35-P, Oil-Fired
Winter Air Conditioners, Steel Vertical
Capacities—input btu/hr.; SU-30-G, 85,000; SU-35-G, 110,000. Capacities (btu/hr. output at bonnet)—SU-30-P, 85,000; SU-35-P, 106,000.



SR-50-G; Gas-Fired, Counter-Flow, Steel
Capacity—input btu/hr. 85,000. Efficient winter air conditioning—controlled heating—controlled humidity and circulation. Low first cost, economical operation. Ideal for perimeter heat systems.

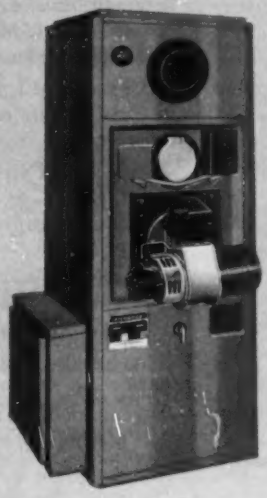


SR-50-P; Oil-Fired Counter-Flow, Steel
Capacity—output at bonnet, 80,000 btu/hr. Efficient winter air conditioning—controlled heating, humidity and circulation. Low first cost, economical operation. Ideal for perimeter heat systems.

SV-40-G; Gas-Fired, Winter Air Conditioner, Steel, Vertical
Capacity—input 85,000 btu/hr. Economical utility type for the smaller home. AGA approved for alcove and closet installation.



SV-40-P; Oil-Fired, Winter Air Conditioner, Steel, Vertical
Capacity—output at bonnet 80,000 btu/hr. Low cost type for small homes and apartments. AGA approved for alcove and closet installations.



SG-10-G, SG-15-G; Gas-Fired, Gravity Furnaces, Steel
Capacities—input btu/hr.; SU-10-G, 70,000; SG-15-G, 90,000. Dependable, automatic heating at low cost.



RICHMOND

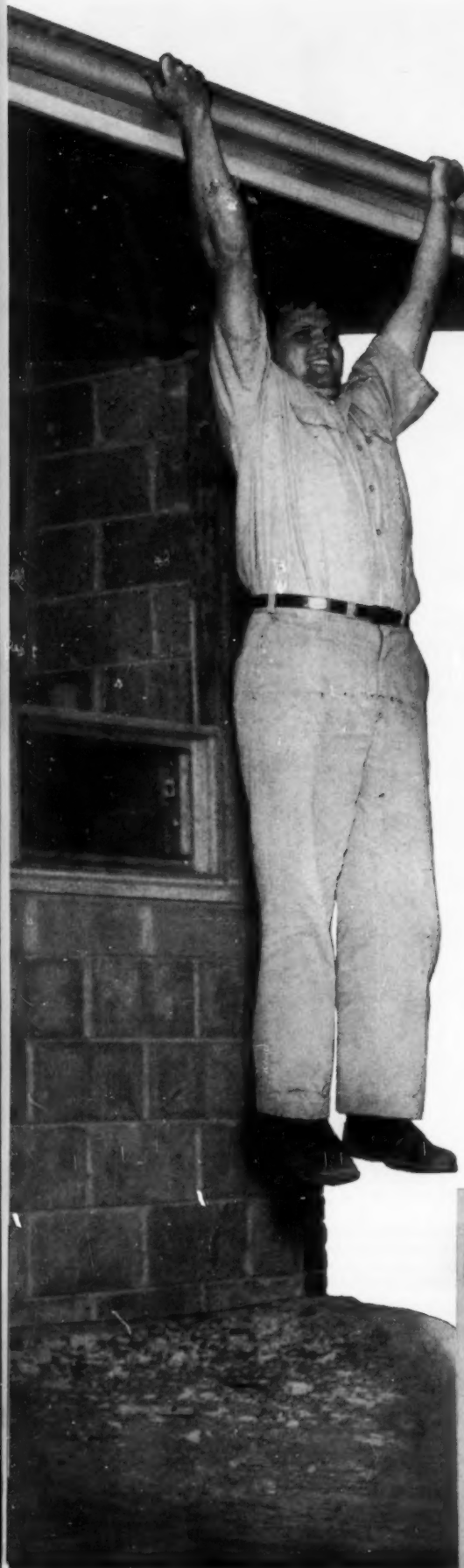
Richmond Radiator Co.
Affiliate of Reynolds Metals Co.

Richmond Radiator Company
Box 111, Metuchen, New Jersey
Please send me descriptive literature on the following furnaces that I have checked.

☐ GHA ☐ SH-P ☐ SH-G ☐ SU-G ☐ SV-P
☐ SG-G ☐ SU-P ☐ SR-G ☐ SR-P ☐ SV-G

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE_____ STATE_____

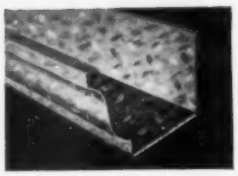
We are ☐ heating wholesalers ☐ heating contractors ☐ building contractors



You need steel for strength like this

–that's why I install MILCOR®

Style K Box Gutters



. . . says Herman Trieb, Trieb Sheet Metal and Roofing Co., 2020 West 43rd St., Kansas City, Kansas

When a gutter can support almost 200 pounds of man — mister, it's strong! It's got the rigidity it needs to make it easy to handle. It's the stuff to hold up under ladders you and other trades place against it. In short, it's got the guts you get only from galvanized.

Natural acids won't harm it, either! Bird-droppings and decaying leaves eat right through aluminum gutter, but not through tough Milcor gutter. Besides, you can solder the joints easily and use black iron or steel nails without oxidation.

All in all, Milcor Style K lets you spend fewer hours on a job, make more money, and give your customers complete satisfaction.

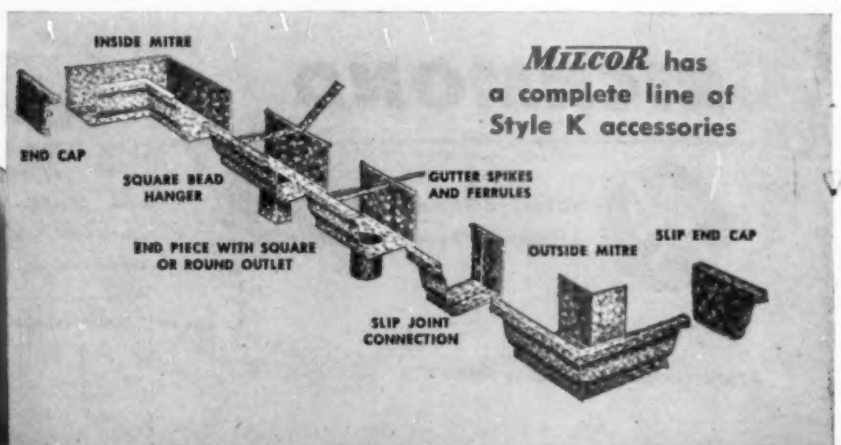
You can get Style K with standard or high back, in 4", 5", and 6" sizes — as shown in Milcor Catalog No. 500. If you don't have a copy, write for it on your business letterhead.

INLAND STEEL PRODUCTS COMPANY

4023 WEST BURNHAM ST. • MILWAUKEE 1, WISCONSIN

BALTIMORE 5, MD., 5300 Pulaski Highway — BUFFALO 11, N. Y., 64 Rapin St. — CHICAGO 9, ILL., 4301 S. Western Blvd.—CINCINNATI 25, OHIO, 3240 Spring Grove Ave. —CLEVELAND 14, OHIO, 1541 E. 38th St.—DETROIT 2, MICH., 690 Amsterdam Ave. —KANSAS CITY 41, MO., P. O. Box 918—LOS ANGELES 58, CALIF., 4807 E. 49th St. — NEW YORK 17, N. Y., 230 Park Ave. — ST. LOUIS 10, MO., 4215 Clayton Ave.

*Reg. U. S. Pat. Off.



MILCOR has a complete line of Style K accessories

Schedule Indoor Comfort Conferences



GUY A. VOORHEES (*second from left*) explains a problem to several students during a recent Indoor Comfort Conference

THREE INDOOR COMFORT Conferences, sponsored by the National Warm Air Heating and Air Conditioning Association with the cooperation of the National Heating Wholesalers Association and local conference committees, have been held so far this year — one in St. Louis, one in Detroit, and one in Chicago. Additional classes are scheduled as follows:

Location	*Dates*	*Chairman*
Cleveland	Feb. 1-2	Harold Sharp, Sharp Heating & Supply Co., 7802 Wade Park Ave., Cleveland 3
Buffalo	Feb. 4-5	Walter Duffy, Morrison Steel Products Co., Inc., 601 Amherst St., Buffalo 7
Boston	Feb. 8-9	Wm. H. Bowe, Jr., Herrick Co., 352 C St., South Boston 27
Hartford	Feb. 11-12	Irving Landerman, Max Landerman, Inc., 209-11 State St., Hartford 3
Cincinnati	Feb. 25-26	C. T. Pfirrmann, The Williamson Heater Co., 3500 Madison Rd., Oakley 9, O.
Columbus	Mar. 1-2	Newt T. Hess, Vorys Bros., Inc., 63 E. Goodale St., Columbus 8
Pittsburgh	Mar. 4-5	Louis F. Demmler, Demmler , Bros. Co., 100-8 Ross St., Pittsburgh 19
Harrisburg	Mar. 8-9	Larry Yost, Bryant Air Conditioning Corp., 4300 Paxton St., Harrisburg
Philadelphia	Mar. 11-12	Alan Kirby, Berger Bros. Co., 229-237 Arch St., Philadelphia
Raleigh, N. C.	Mar. 15-16	H. L. Godwin, Nicholson, Inc., P. O. Box 1050, Durham, N. C.
Birmingham	Mar. 19-20	Geo. F. Wheelock, Geo. F. Wheelock Co., 3017-25 2nd Ave., S., Birmingham 5
Milwaukee	Mar. 29-30	F. J. Engler, Milwaukee Stove & Furnace Supply Co., 323 Juneau Ave., Milwaukee 8
Minneapolis	Apr. 1-2	A. R. Rees, Waterbury Heating Supply Co., 2412 University Ave., S. E., Minneapolis 14
Portland, Ore.	Apr. 8-9	George D. Montag, Kleenair Furnace Co., 5329 N. E. Sandy Blvd., Portland 13, Ore.
San Francisco	Apr. 12-13	J. F. Deane, International Sales Co., 1045 Evans Ave., San Francisco
Los Angeles	Apr. 15-16	Leo Hungerford, Utility Appliance Corp., 4851 S. Alameda Ave., Los Angeles
Denver	Apr. 22-23	J. H. Singleton, C. A. Crosta, Inc., 1830 Market St., Denver

Construction to Continue High in '54

STRONG REASSURANCE as to the business outlook for 1954 is the prevailing tone of reports by 138 leading economists recently polled by Thomas S. Holden, vice chairman of F. W. Dodge Corp. This year will likely be the nation's second biggest business year, according to majority opinion. Of the economists polled, 49 are in business organizations, 41 in colleges, 28 in financial organizations, four in government, and 16 are business consultants.

Moderately declining construction activity is expected by a majority. They forecast that 1954 government totals will be down 8 per cent from 1953 in dollar volume. There is general expectation of a decline in residential building, but nevertheless there is expectation of a big year of more than 1 million nonfarm dwelling units, which would be a decline of about 7 per cent from 1953's total in dollars.

AGA Reports 1953 Industry Gains

THE AMERICAN Gas Association reports that approximately 5000 miles of pipeline were laid in 1953, with nearly 3000 additional miles just started or under way as the year ended. At the end of 1953, the nation's utility and pipeline network of gathering, transmission, storage and distribution lines for natural gas were estimated at more than 394,000 miles. With the distribution systems of manufactured and mixed gas companies totaling another 50,000 miles, the industry's pipeline mileage totaled about 445,000 miles.

Natural gas was delivered in greater volume last year to Massachusetts, New Hampshire and Connecticut, augmenting supplies of cities such as Boston, New Haven and Hartford. Rhode Island received natural gas for the first time in 1953. A proposed extension of a present line would bring natural gas to Maine. Several new lines will be constructed within the next two years.

WHAT'S HAPPENING —

(*Continued from preceding page*)

The American-Louisiana Pipeline Co. will build a 1200 mile, 3 in. transmission line from Texas and Louisiana to Michigan. A line of nearly 900 miles to be built by the Gulf-Interstate Co. will bring more natural gas to the Appalachian region from Louisiana. Two companies have declared their intention of bringing more natural gas to the New York, Philadelphia and Newark metropolitan areas.

Recoverable reserves of natural gas continue to be ample to supply the increasing demand. AGA's committee on reserves estimated at the beginning of 1953 that reserves of natural gas were 199.7 trillion cu ft. This was an increase of 5.9 trillion cu ft over estimated reserves a year earlier.

The industry added 1,090,000 new gas househeating customers to its lines during the 1952-53 heating season. This brought the total of residential gas househeating customers to about 11,750,000, AGA estimates. It is anticipated that there will be 1,221,000 new gas househeating customers in the 1953-1954 heating season, and nearly 1,200,000 more homes will get gas for heating in each of the two succeeding heating seasons.

Fast Growing Market for Home Cooling

AN INCREASE of more than 100 per cent in sales of central system air conditioners for the home in 1954 was predicted recently by S. J. Levine, general manager of the General Electric Co's. home heating and cooling department. He estimated that central system home cooling units would be installed in more than 120,000 new and existing homes this year compared with some 50,000 such installations last year.

"Sales of central system home cooling units should pass those of packaged cooling equipment sold for installation in commercial and industrial establishments in 1954," he said, "and by 1955 they should overtake room cooler sales in dollar volume."

Emphasizing that the potential of the home cooling market is just beginning to be tapped, Mr. Levine declared that by 1963 annual sales of central system home units would be close to the million mark.

Rule on Use of Term "Free"

THE FEDERAL TRADE Commission recently approved a new trade practice rule with respect to the use of the word "free" in advertising and other commercial offers as descriptive of any article of merchandise or service.

Previously approved "free" rules prohibited the designation of an article of merchandise as "free" if there were any conditions, even though fully disclosed, which had to be complied with in order to receive such an article. However, under the new rule the word "free" can be used even though receipt of the article or service described is contingent on compliance with certain conditions, provided all such conditions are clearly and conspicuously disclosed. The disclosure of such conditions is required to be made "at the outset" — that is, the disclosure must be made in close conjunction with the word "free" wherever it first appears in each advertisement or offer. The rule also contains certain provisions with respect to the good faith of the use of the word "free," inhibiting its use where there has been an increase in the price of the merchandise required to be purchased or a reduction in its quality or quantity.

Home Renovation "No. 1 Problem"

THE "NO. 1 HUMAN PROBLEM" in the U.S. -- the decaying of urban housing — received attention at a meeting held recently at the request of the National Association of Home Builders, the National Association of Real Estate Boards and the Mortgage Bankers Association. A round table agreed upon a detailed set of recommendations for every city, and called for "a new kind of partnership between government and the men whose business it is to provide better homes."

Albert M. Cole, Housing & Home Finance Agency administrator, and Guy T. O. Hollyday, FHA commissioner, attended as observers.

A preliminary report, issued by the panel, states that, "Americans can afford to spend much more on their homes than they are spending today. We are enjoying by far the highest living standards in all our history in everything except housing and municipal services. For housing, Americans used to spend 20 to 25 per cent of their incomes; today the average is less than 13 per cent."

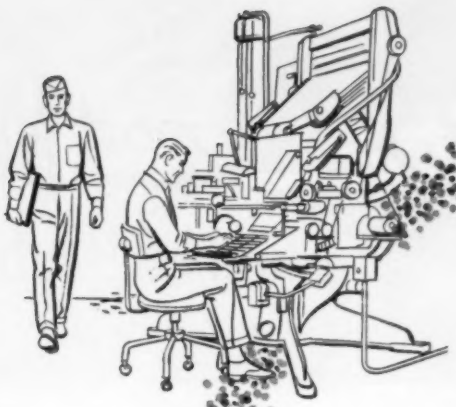
Discussing the role of the home builder in renovation, the report points out that they are developing two programs: the modernization of individual dwellings in good or fairly good neighborhoods, and renovation and reconstruction in blighted areas. Under a trade-in program proposed, the home builders would accept used houses as part payment for new homes, then remodel them for resale, in the same way that automobile dealers take used cars in trade. Under a proposed block rehabilitation program, the builders would buy up a row of aging houses and see how well and how economically they could rehabilitate them.

FHA Plans Aid for Home Trade-In Market

FHA ADMINISTRATOR Guy Hollyday plans to recommend to the 84th Congress that down payments on old buildings be made equal to those for new housing, according to House & Home. At present the buyer of an old house must pay at least 20 per cent down on a FHA insured mortgage, while for a new house it is possible to pay as little as 5 per cent.

In addition, Mr. Hollyday has inaugurated a three-part program under which FHA will 1) stimulate new house sales by encouraging families to trade in old houses for new, 2) encourage builders to get into the modernization business and 3) encourage builders to improve housing everywhere by repair and modernization.

Modernization can be recognized as a major need when it is realized that over ½ of the houses in the U.S. are over 35 years old and there are 6 million of them substandard.



WORDS BY THE MILE...ON METAL

The history of tomorrow is being chronicled today on the pages of America's great newspapers. Speed and precision work hand in hand to bring you up-to-the-minute news in accurately set easy-to-read type.

Progress has been the constant and continuing objective of typesetting machine manufacturers since their inception, in 1901. Emerson-Electric was selected to pioneer in the powering of these early machines and over the years has kept pace with the newest developments.

Your product, too, can benefit from Emerson-Electric's 63 years of motor manufacturing experience. We specialize in building dependable motors in ratings from 1/20 to 5 h.p., and hermetic motors from 1/8 to 20 h.p. Your inquiry is invited.

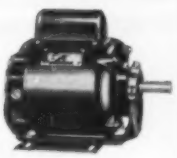
THE EMERSON ELECTRIC MFG. CO.

ST. LOUIS 21, MO.



EMERSON-ELECTRIC MOTORS

For Belted Fans and Blowers



These motors incorporate all the electrical and mechanical specifications best suited for this service. Split-phase motors, available in 1/6, 1/4 and 1/3 h.p., with resilient mountings and automatic reset thermal protectors. For complete data write for Motor Bulletin No. 463.

EMERSON ELECTRIC

MOTORS • FANS APPLIANCES

Luxaire® most MODERN ... line of Heating Equipment

NOW OFFERS

YEAR 'ROUND AIR CONDITIONING
in ONE COMPLETE UNIT

IT COOLS in Summer!



IT HEATS in Winter!

Automatic Indoor Climate 365 Days a Year

The Luxaire Year 'round Air Conditioner is new . . . it's revolutionary — it's the unit that builders want for their 1954 homes.

. . . It's one complete unit — for heating . . . for cooling — housed inside a single cabinet.

. . . It's unusually compact, requires less installation space than most standard heating units.

. . . Can be safely installed with the 2 sides and back of the cabinet close to walls and partitions. Everything accessible from front of cabinet.

. . . Compact, smartly styled, rigidly constructed cabinet has smooth, baked enamel finish.

. . . It's priced to meet competition.

2 POPULAR SIZES

2 Ton Cooling with Heating Input 100,000 B.T.U. Gas . . . 105,000 B.T.U. Oil
3 Ton Cooling with Heating Input 140,000 B.T.U Gas . . . 165,000 B.T.U. Oil

Year 'Round AIR CONDITIONERS Approved for Either GAS or OIL

most COMPLETE ... most VERSATILE

with units APPROVED for either GAS or OIL!

FILL ANY ORDER FOR HEATING-AIR CONDITIONING with Luxaire

With Luxaire in '54 you'll feature the largest — the most complete — the most versatile line of heating and air conditioning equipment available. You will be ready to meet all competition. You can fill any order for gravity, forced air or perimeter installation. You also have the added selling power of units that will burn either gas or oil with equal efficiency.

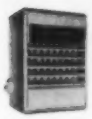
With Luxaire in '54 you can profit from the growing demand for year 'round air conditioning systems. The Luxaire "add-on" cooling unit is readily adaptable to existing systems, and the "year-round" package unit is the answer for the new house.

So — go into high gear in '54. Get the complete story from your Luxaire jobber of the profit-opportunities with the Luxaire line.

THE Luxaire C. A. OLSEN MANUFACTURING COMPANY • • ELYRIA, OHIO

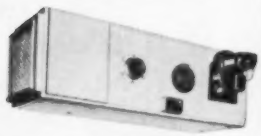
HEATING & AIR CONDITIONING UNITS

UNIT HEATERS



4 SIZES
64,000 to 170,000
B.T.U. Input

HORIZONTAL FURNACES



GAS in 2 SIZES
65,000 and 85,000
B.T.U. Input

OIL in 2 SIZES
84,000 to 123,000
B.T.U. at Bonnet

GRAVITY FURNACES



As a Gas Unit
80,000 to 130,000 Input

As an Oil Unit
60,000 to 100,000 at Bonnet

UTILITY UNITS



As an Oil Unit
84,000 to 123,000
B.T.U. at Bonnet



As a Gas Unit
65,000 to 140,000
B.T.U. Input

COUNTERFLOW UNITS



As an Oil Unit
84,000 to 123,000
B.T.U. at
Discharge Outlet



As a Gas Unit
65,000 to 140,000
B.T.U. Input



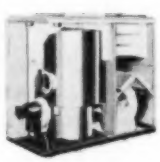
COAL FIRED A.C. UNITS

86,642 to 127,633
B.T.U. at Register

BASEMENT A.C. UNITS



As a Gas Unit
70,000 to 250,000
B.T.U. Input



As an Oil Unit
92,000 to 212,000
B.T.U. at Bonnet

OIL CONVESION BURNERS



.75 to 13.0
gallons per hour

INCINERATORS



2 Bushel with
or without Gas

GAS CONVERSION BURNERS



3 Sizes
150,000 to 300,000
B.T.U. Input

TREMENDOUS NATIONWIDE ELECTRONIC MODUFLOW



This advertisement will appear in Life magazine, January 11th. It features a house built by Albert Balch, Seattle builder. Other ads during the year will feature houses built by other leading builders.

PROMOTION FOR BEGINS!

—13 double spreads in LIFE

Powerful program for 1954

Beginning this month, over 9,000,000 readers of *Life, American Home* and *Living for Young Homemakers* will be reading about Electronic Moduflow.

And a lot of them will be wanting it in their homes. So find out about Honeywell Electronic Moduflow and the great new selling opportunity it offers you.

For complete information about Electronic Moduflow, call your local Honeywell office, or write to Honeywell, Dept. AA-1-05, Minneapolis 8, Minnesota.

Never Before Such An Exciting Boost To Heating Comfort

The public's interest in heating comfort will grow, when helped along by ads like the one you see reproduced here. Such ads will boost the demand for Electronic Moduflow—and will make control installation profits easier for you to realize.

MINNEAPOLIS **Honeywell**

First in Controls

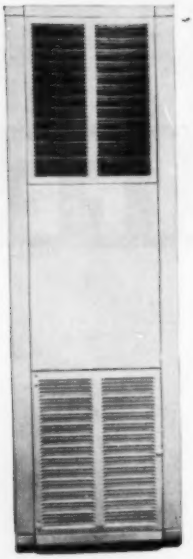
104 OFFICES ACROSS THE NATION

JOHN ZINK

JZ

HEATMAKERS

for All DOMESTIC HEATING NEEDS



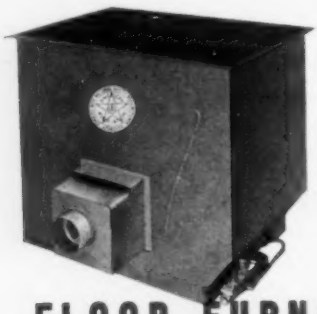
WALL HEATER

John Zink's new WH-25 Recessed Wall Heater fits standard 2" x 4" stud partitions on 16" stud centers, is barely 58" high. Attractive modern design and finish. Available in standard and radiant styles.

CENTRAL HEATER

John Zink Central Gas Heaters are available in Vertical or Horizontal Forced air models. Suitable for installation in attic, closet, basement, utility room, under the floor, or as a suspended heater. Attractively finished. Complete, packaged unit.
HB-65, HBD-65,
HBD-80, HB-100,
HBD-100 &
HB 130 Heaters





FLOOR FURNACE

John Zink Gas Fired floor furnaces are available in 5 conventional and short models with input ratings from 30,000 b.t.u./hr. to 85,000 b.t.u./hr. When equipped with safety pilot and automatic temperature control they are a complete heating plant in a package. A.G.A. approved.

STREAMLINED



CONVERSION BURNER

Easy to install. Operates manually or automatically. Burns clean fuel — natural, mixed, manufactured or LP gases — without soot or smoke. Four sizes available for either vertical or horizontal firing.

Write for Literature

JOHN ZINK COMPANY

4401 SOUTH PEORIA TULSA 18, OKLAHOMA



Arnold Kruckman's

Washington Letter

Restrictions Off Nickel and Nickel Bearing Steel

THE WORD here is that thousands upon thousands of small manufacturers and sheet metal contractors throughout the country—including fabricators and platers—who have been seriously handicapped by the restrictions of government order M-80 are now able to plan better in relation to consumer goods which use nickel. The government seems to be tending to avoid interfering with the flow of the supply of nickel and nickel bearing steels to the various parts of the economy.

The situation has brought much relief to the small business committees of Congress, as well as to the Small Business Administration. The small business committees were under extreme pressure from thousands of users of nickel while the government's restrictions were in force. These committees, the SBA and the agencies in the Department of Commerce and Department of the Interior apparently feel that the private allocation system operated by the industry itself will protect the small users even better than did the government controls.

However, there is no immediate prospect of any great change in the supply of nickel, according to government authorities. As is well known, the bulk of our supply of nickel comes from Canada. Our northern neighbor supplies other nickel users of the world. We therefore simply get our share, and this share is naturally determined by trade needs, trade transactions and defense requirements. Our secondary supply comes from Cuba, which, naturally, has the same problems in relation to customers. In 1952 Canada shipped to us 146,582,675 lb of refined nickel, 29,129,416 lb of oxide and oxide sinter, and 28,835,464 lb of matte. Bureau of Mines records show that in 1952, Cuba shipped us 18,781,304 lb of nickel oxides. The receipts for 1953 are expected to be substantially greater.

There will be no increase in the diversion of nickel specifically for the fabrication of stainless steel, but there will be an increase in the 300 series of stainless steel sheets allocated to the sheet metal contractor in place of the chrome type (400) stainless steels. All those who use nickel in any way for any purpose are expected to get out into the market and scramble for their supply. However, there is still some priority given to government stockpiles.

Many Groups Concerned with Nickel

Interest in nickel is especially high in the small business committees of the Senate and the House. The changes in progress in the Small Business Administration have made it difficult to identify those who will be responsible for any problems connected with nickel. At present the subordinate personnel in SBA is extremely wary of responsibility. This will be the situation until the White House definitely settles the question of the permanent headship of the agency. Several persons have been mentioned. Wendell B. Barnes, who has been general counsel since the agency began to function, is now acting administrator, and it is the opinion of many that he should and will be designated as permanent administrator.

The National Distribution Council, an advisory body in the Department of Commerce and a part of the Business and Defense Services Administration, is interested in both SBA and in the problems of the nickel users. This organization recently met with the Secretary of Commerce. It includes representatives from the Associated Business Publications, the Sales Management Magazine, American Association of Advertising Agencies, the Curtis Publishing Co., Vance Publishing Co., Parade Publication, Inc., Association of National Advertisers, Society of Business Magazine Editors, National Retail Dry Goods Association, Reynolds Metals Co., National Automobile Dealers Association, Sears, Roebuck and Co., and other organizations.

Other agencies of government concerned with nickel include the Bureau of Mines of the Department of the Interior and the Iron and Steel Division of the Business



Washington Letter

and Defense Services Administration of the Department of Commerce. Also, the Bureau of Foreign Commerce of the Department of Commerce takes a hand in nickel problems. It has just announced that exports of nickel-bearing stainless steel have been "open-ended" for the first quarter of 1954. Under this arrangement, no quantitative limit on exports is set, but they are controlled to safeguard the national security. Those who export nickel-bearing stainless steel must file applications each quarter with the Bureau of Foreign Commerce. If you wish to obtain a list of the open-ended nickel products, and their schedule B numbers, apply to the Bureau of Foreign Commerce, U. S. Department of Commerce, Washington 25, D. C.

Some Taxes Reduced — Others May Be

As every business man knows, the excess profits tax expired on January 1, and the individual income tax also was lowered then by about 2 to 10 per cent. As they see it here in Washington, the excess profits tax is not apt to be burdensome — either on or off — to the sheet metal contractor and the warm air heating dealer. It is assumed those who will chiefly feel it are the members of the economy who particularly have made striking profits as the result of the Korean War and related industrial activities. The reduction in the individual income tax applies to all individual tax payers. It is suggested that it should be stimulating to the business of the sheet metal contractor and the warm air heating and residental air conditioning dealer because it will encourage many people to make repairs, to rehabilitate, to apply what they save in taxes to things they have wanted for the improvement of their homes and businesses.

The cut in the income tax and the elimination of the excess profits tax are the only certainties that are ahead in the tax-saving picture. Under existing law, the rates used under the payroll taxes imposed upon both employer and employee in connection with the social security program were to increase from 1½ to 2 per cent on January 1, 1954. In his tax recommendations of May 20, 1953, the President recommended that this increase be postponed until January 1, 1955. Congress has taken no action on this recommendation. Probably what it does will be the effect more of what it learns among the workers and the business people back home than what it is requested to do by the Administration.

The tax shift that is of very serious interest to trade organizations represented here — 542 of them — is the reduction in the normal corporate income tax rate from 30 to 25 per cent and the combined normal and surtax rates (which apply to incomes in excess of $25,000) from 52 to 47 per cent — a cut scheduled for April 1, 1954. Since the reduction occurs in the normal tax, it is significant for all taxpaying corporations. There will, no doubt, be conflict on this matter between Congress and the Administration. Representative Reed makes no secret of his purpose to lead a well organized fight for it, and apparently he has more following on this issue than he had last year when he tried to put over his tax reduction program.

Another tax which will come up for vigorous discussion is the excise tax. Most businessmen seem to favor a reduction — in some cases, a complete elimination. The reduction is chiefly desired in that small group of products to which excise taxes were applied by the Revenue Act of 1951. This includes such widely used products as gasoline, cigarettes, beer, etc. Many businessmen and their organizations are preparing to make a very determined fight. At the same time, the Administration places much emphasis on its opposition to any change.

There appears to be so much opposition to taxes as they are from the people in the lowest income bracket to those in the highest that Congress is extremely conscious of a need to do something to ease the burden. A number of well-financed organizations are making it their business to inform tax payers that the federal budget today costs every family an average outlay of over $1650 per year. This federal spending of more than $70 billion represents more than 20 per cent of the national income — as compared with a little more than 2 per cent 40 years ago.

Government Expenditures to Exceed Income

Government expenditures are still going up and are expected to reach their highest level in the fiscal years 1954 and 1955. This increase stems from the fact that from fiscal year 1950 through fiscal year 1953 (plus the potentials of the 1954 budget), expenditures exceed actual or estimated revenues of the same five years by something between $95 and $100 billion.

It is in consequence of this condition that there has been a steady buildup in orders placed with manufacturers calling for the delivery of goods in 1954, 1955 and later — orders for which cash will have to be paid on delivery. The Treasury Department is reported to be responsible for the statement that as of last June 30, there were forward committments of around $81 billion for which cash would have to be paid from the future income



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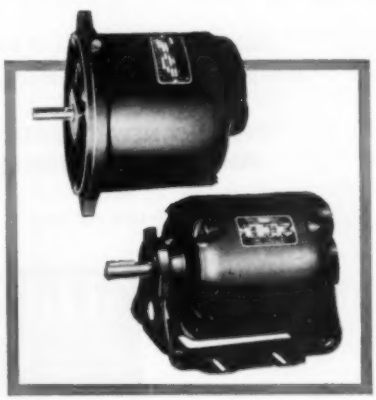
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WASHINGTON LETTER —

of the years to come. It is this situation which confronts the Administration and the Congress, and which gives them the almost insoluble problem of what to do about the taxes that legally will expire and lower government income.

As matters stand now, by fiscal year 1955, when government spending is expected to be at its peak, planned tax reductions will have begun — and only begun — to reduce government income by $8 billion annually. There are those who believe that the only recourse for the government is to reduce veterans' benefits, farm price supports and grants to state and local governments. It isn't difficult to appreciate the dilemma this presents to the White House and to the Congress.

Rowland R. Hughes, deputy director of the budget, makes this comment: "Make no mistake, the opposition to reduction, which is not of any one particular political party, is not of the kid glove variety. It is aggressive, well-organized, persistent and clever and experienced in the use of propaganda. It will take active and continuous team work and courageous, determined effort of all who believe in a sound fiscal program to win through. I believe it can be done."

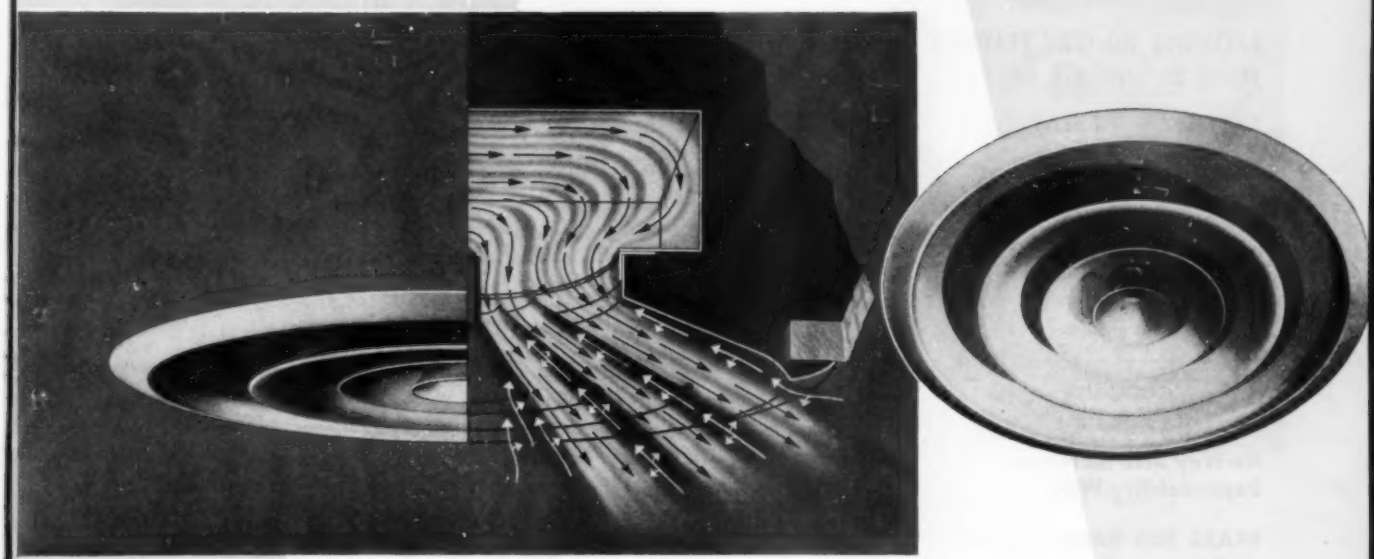
While on the subject of the cost of government, it is interesting to note that the Council of State Chambers of Commerce in Washington, D. C., in its recent Bulletin No. 118, brings out the fact it would take the equities of stockholders in 29 large and well known corporations to equal the $30.5 billion which is the value of the government's investment in federal business-type enterprises. The bulletin calls the federal government "America's biggest holding company." It points out that "this business empire" of the federal government is to undergo a critical examination by the new Hoover commission, known as the Commission on Organization of the Executive Branch of the Government. The study shows that the 29 corporations it has in mind paid $4,931,000,000 in taxes and $2,055,000,000 in dividends in 1952.

SBA, GSA Cooperate on Small Business

SBA lists six "common sense" credit requirements as a general guide to those interested in SBA's loan program: (1) The applicant must be of good character; (2) there must be evidence the applicant has the ability to operate his business successfully; (3) on a term loan — repayable in installments over a period of several years — the past record and future prospects of the business must show sufficient probable income so it can be logically assumed the applicant will be able to repay the loan out of the future income from the business; (4) the applicant must have enough capital in the business so that with loan assistance from SBA it will be possible to operate on a sound financial basis; (5) the loan must be of such sound value or so secured as reasonably to assure repayment; (6) the loan should aid the defense program or be necessary to maintain a well-balanced na-

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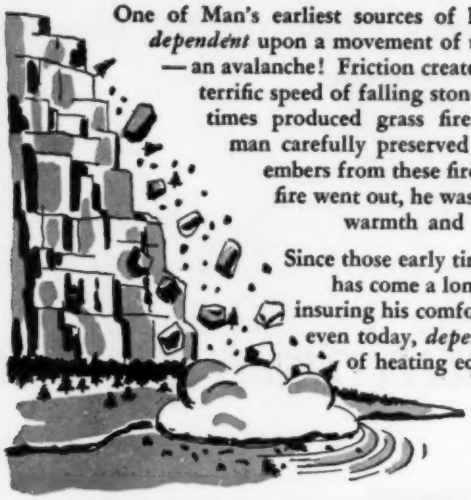
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MAN'S QUEST FOR DEPENDABLE HEAT



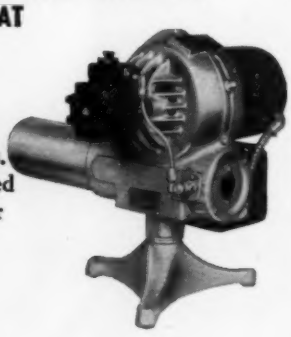
One of Man's earliest sources of heat was *dependent* upon a movement of the earth — an avalanche! Friction created by the terrific speed of falling stones, sometimes produced grass fires. Early man carefully preserved burning embers from these fires. If his fire went out, he was without warmth and comfort.

Since those early times, man has come a long way in insuring his comfort. And even today, *dependability* of heating equipment is vital.

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EXCLUSIVE NU-WAY NOZZLE SHIELD

Protects nozzle from heat and carbon deposits. Carbon on an unprotected nozzle reduces oil burner efficiency as much as 20% in one season.





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BRASS BUS BARS — To reduce chances of shorting and deterioration. No springs or wires.

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Patented aluminum foil shield eliminates radio and television interference.

NU-WAY DEPENDABLE HEATING EQUIPMENT

Write Dept. AA-154 for details on the Nu-Way line.

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OIL HEATING EQUIPMENT
LOOK FOR THE FLAME

"Automatic Oil Heat Exclusively Since 1921"

WASHINGTON LETTER —

tional economy. Acting Administrator Barnes invited more than 16,000 banks across the country to co-operate with SBA in meeting financial needs of the nation's small business.

SBA has joined General Services Administration to bring complete information about pending government purchases of civilian-type goods to small business concerns. The two agencies have arranged a full interchange of information so that field representatives of either agency will be able to tell business concerns what GSA is buying and what SBA is doing to assist small firms.

The agencies plan for the future to house the information facilities of both under one roof. GSA operates business service centers in 11 cities. These maintain for public inspection copies of all current bid invitations and essential general information. SBA has 30 field offices across the country in local areas. Under the program announced, GSA will advise SBA of current bidding on a regional basis. For example, the GSA office in Denver will supply SBA representatives in the Rocky Mountain area with bid information and other basic facts. SBA field offices will make surveys and make recommendations as to the competence of individual small firms bidding on GSA purchases of goods and services.

Industry Leaders View Business Prospects

Recently, 41 major representatives of the same number of leading industries of the United States met in New York. For several days they talked over the industrial, commercial, financial and other affairs of the nation. It is interesting to learn, from participating government sources, that these individuals, representing the key industries of the nation, felt thus about the prospects ahead: Six saw better times; seven felt there would be no changes; eight looked for virtually the same business as they had been doing; three predicted that the dollar volume would be off, but that the production volume would be higher; 14 of them foresaw a decline in business ranging from 2 to 15 per cent; two were certain the decline would be from 20 to 25 per cent; one asserted that the decline would be considerably over 25 per cent.

Unfortunately the government source would not indicate the industries responsible for the different calculations. We do know, however, that the automobile industry predicts it will produce 6 million units (cars and trucks) in 1954, as compared with 7.4 million units in 1953; this is, of course, a decline of 19 per cent. However, this will still be the third biggest year in the industry's history. It is interesting to note that the gasoline producers say their business last year was at an all-time record, totaling $34.7 billion, and that this year there will be a decline of from 2 to 3 per cent.



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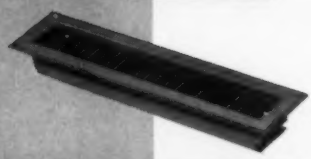
GRAVITY!

3-WAY GRILLES!



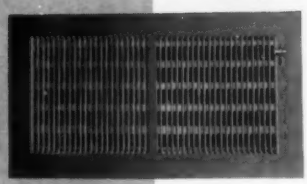
FORCED AIR!

WALL DIFFUSERS!



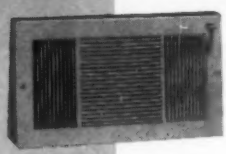
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COLD AIR FACES!



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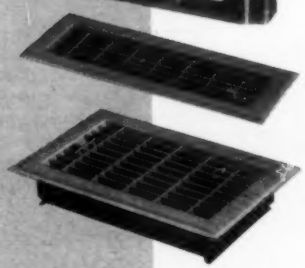
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Today they are your best-engineered and most efficient warm-air registers, grilles and diffusers for all types of warm air installations. They have *modern style* and *in-built quality*.

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MUST READING for the residential air conditioning trade!



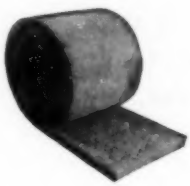


Thermal and acoustical insulation of ducts can "make or break" an air conditioning job. That's why Gustin-Bacon, manufacturers of glass fiber duct insulation for air conditioning, has prepared a new booklet offering suggestions of value to oldtimers, as well as newcomers in the field. Write for your free copy today.

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38,000 AAF HV units

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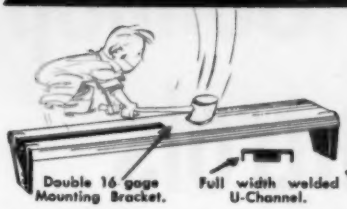
38,000! The very number is impressive. But it's the vital importance of the service they render that emphasizes the acceptance for the HV unit's many design and performance advantages.

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COMPANY, INC.
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New Improved Viking Blowers

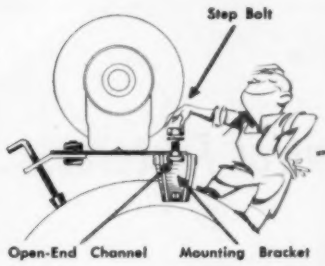


Motor Mounting Bracket — more than adequately supports motor insuring pulley alignment. Reduces bearing and pulley wear.

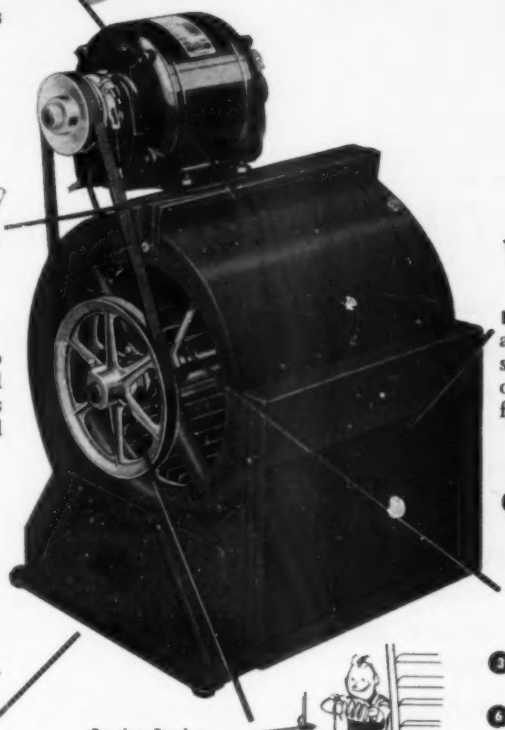
★ **Quieter** Trouble-Free Performance

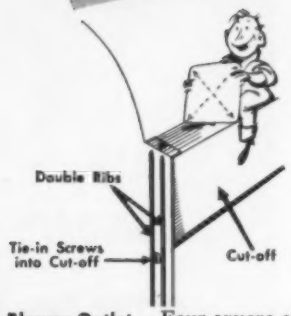
★ **Easier** to Install and Service

★ **Reduced** Assembly Time and Cost

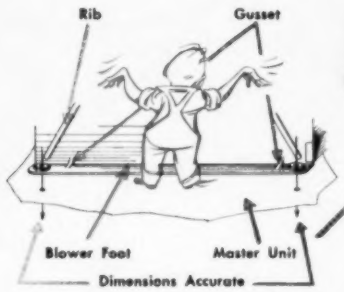


Motor Mounting — Step bolts slip easily into open end U-Channel and are held securely to permit hex nuts over motor base to be tightened with one hand.

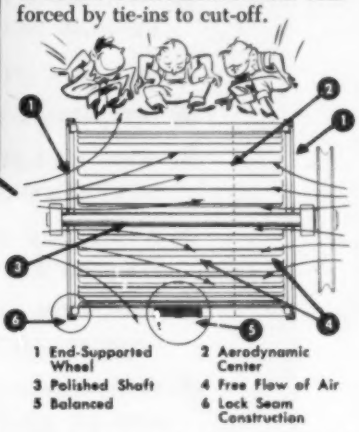




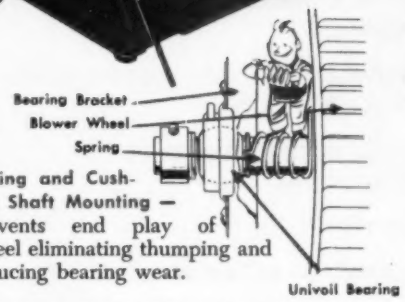
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Spring and Cushion Shaft Mounting — Prevents end play of wheel eliminating thumping and reducing bearing wear.

Equipped with either Viking Univoil Bearings that can be adjusted 360 degrees to assure that the oiling slot is always on top to make oiling easier, or Viking permanently greased bearings that lubricate indefinitely for inaccessible locations.

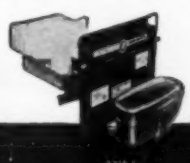
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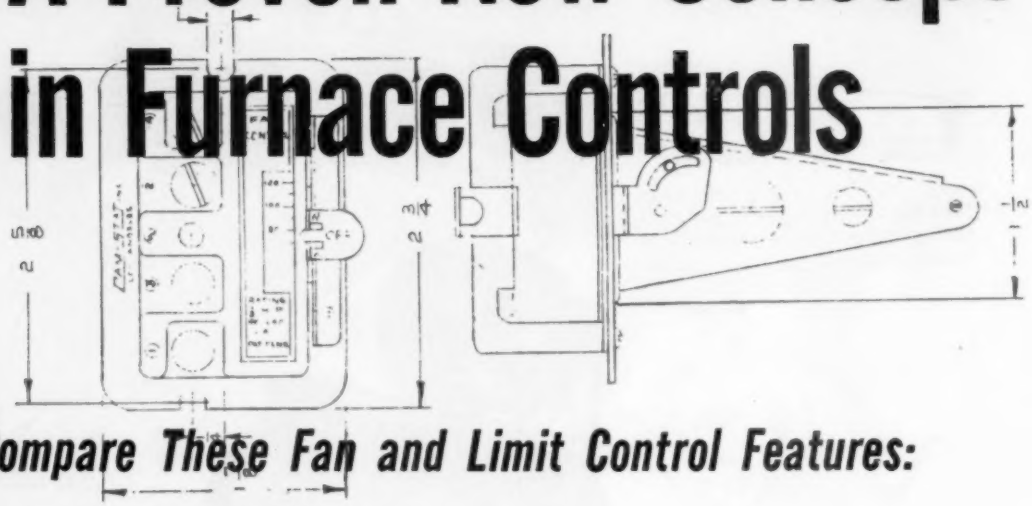

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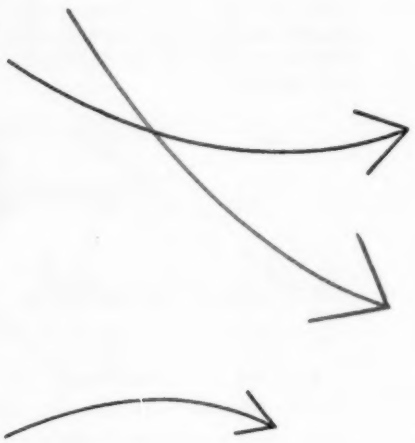
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Compare These Fan and Limit Control Features:

- **TWO YEAR GUARANTEE**
- **SIXTY DIFFERENT COMBINATIONS**
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Complete application testing available to furnace manufacturers, without obligation

Complete flexibility with highest quality



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YOU'LL PROFIT IN THE SMALL HOME MARKET WITH

These 4 New SUNBEAM Units

• Designed especially for today's small homes, these new Sunbeam units are just what you need to get a larger share of this profitable market. All four units are available in 3 sizes—76,000, 90,000 and 100,000 Btu output per hour. They may be safely installed in closets, alcoves, utility rooms and other out-of-the-way locations.

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AVAILABLE IN 3 SIZES—76,000, 90,000 and 100,000 Btu output per hour at bonnet.

APPROVED FOR ZERO CLEARANCE in either gas fired or oil fired models.

GAS FIRED MODEL has quiet, new design single upshot burner.

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HEAVY GAUGE HEATING ELEMENT with single pass radiator.

LARGE, READILY ACCESSIBLE CLEANOUT.

MANUAL RESET limit control.

BUILT-IN, REPLACEABLE TYPE FILTERS. Easily removed.

FACTORY ASSEMBLED furnace unit.

GAS OR OIL BURNER READILY installed on the job.

CONVERTS FROM ONE FUEL TO ANOTHER—oil units easily converted to gas with no loss in capacity.

AGA APPROVED FOR GAS—burns natural, manufactured, mixed, LP, and LP-air gas.

UNDERWRITERS' LABORATORIES LISTED FOR OIL FIRING with Arcoflame burner.

FULL CAPACITY QUIET BALANCED BLOWER.

OCCUPIES MINIMUM FLOOR SPACE—small size requires only 23¾ x 23¾; the other sizes, only 26¾ x 26¼ inches.

COMPLETELY ACCESSIBLE FROM FRONT.

The New WINTERGLO Utility Type WINTER AIR CONDITIONER

AVAILABLE IN 3 SIZES—76,000, 90,000 and 100,000 Btu output per hour at bonnet.

APPROVED FOR ZERO CLEARANCE and installation on combustible flooring.

FOR OIL FIRING unit is furnished with famous Arcoflame burner.

GAS FIRED MODEL has quiet, single upshot burner of new design.

HEAVY GAUGE HEATING ELEMENT with single pass radiator.

LARGE, READILY ACCESSIBLE CLEANOUT.

FACTORY ASSEMBLED FURNACE UNIT.

GAS OR OIL BURNER readily attached at point of installation.

CONVERTS FROM ONE FUEL TO ANOTHER—oil units easily converted to gas with no loss in capacity.

FULL CAPACITY, QUIET, BALANCED BLOWER

AGA APPROVED FOR GAS, burns natural, manufactured, mixed, LP, or LP-air gas.

UNDERWRITERS' LABORATORIES APPROVED FOR OIL FIRING with Arcoflame burner.

OCCUPIES MINIMUM FLOOR SPACE—small size requires only 23¾ x 23¾; the other sizes, only 26¾ x 26¼ inches.

BUILT-IN BOTTOM FILTER INLET IS STANDARD—Side filter frames are optional.

For detailed information on these and other American-Standard SUNBEAM warm air heating and summer air conditioning products, contact your wholesale distributor. **Sunbeam Air Conditioner Division,** American Radiator & Standard Sanitary Corporation, Bessemer Building, Pittsburgh 22, Pa.

AMERICAN-Standard

SUNBEAM AIR CONDITIONER DIVISION

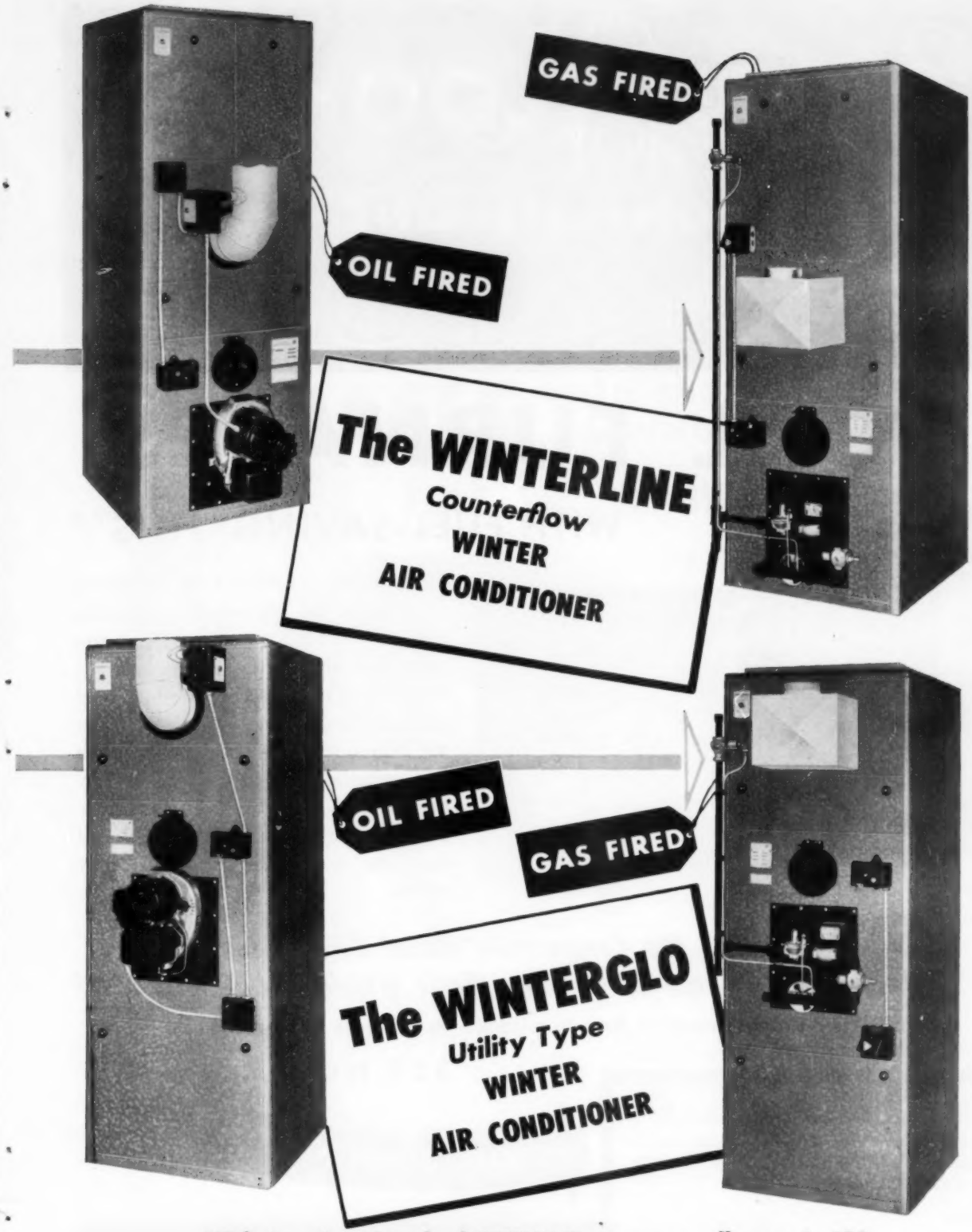
ELYRIA · OHIO

Executive Offices: Bessemer Building, Pittsburgh 22, Pennsylvania

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS • SUNBEAM AIR CONDITIONERS

S.B.—10



With American-Standard SUNBEAM, you can sell more in '54

The American-Standard SUNBEAM line—including present best sellers, brand new units now being introduced, and important additions coming soon—gives you the best rounded array of top quality products on the market. With this nationally advertised line, you'll have *everything* you need to get a large share of the year 'round air conditioning business in your community. **Sunbeam Air Conditioner Division,** American Radiator & Standard Sanitary Corporation, Bessemer Building, Pittsburgh 22, Pa.

STOP! LOOK!

AT THE COMPLETE LINE OF

VICTOR

COAL FURNACES

WITH FUEL-SAVING "FINS" *



Since 1890, VICTOR Coal Furnaces . . . with the patented, exclusive, fuel-saving FINS . . . have been the standard of quality in the heating industry. Complete in models and sizes for every type installation, the VICTOR Coal, Gas, and Oil furnace line enables you to sell MORE furnaces F-A-S-T-E-R for BIGGER profits on every job you sell. VICTOR FIN Furnaces are made under no other name.

Get Out of the Competitive Class! Sell a Line With Exclusive Features of Genuine Merit Which SELLS FASTER!

***VICTOR Coal Furnaces Are Available in Models Without Fins**

ACT NOW . . .

HALL-NEAL FURNACE CO.
1322-42 No. Capitol Ave., Indianapolis 7, Ind.

Gentlemen: Without obligation, please send at once complete information on the VICTOR Coal, Gas, and Oil Furnace line.

NAME_____

FIRM_____

STREET_____

CITY_____ STATE_____

MAIL COUPON TODAY!

HALL-NEAL FURNACE CO.
1322-42 NO. CAPITOL AVE., INDIANAPOLIS 7, IND.

TM—50

.....LISTEN!
to What They're Saying About
VICTOR

FURNACES WITH FUEL-SAVING FINS

For GAS . . . For OIL . . . For COAL



VICTOR dealers everywhere are gleefully adding up the larger profits made this year with this easier-to-install, faster-selling furnace line. The reasons VICTOR dealers sell F-A-S-T-E-R for larger profits are the many features of genuine merit, **exclusive** with VICTOR Gas, Oil, and Coal Furnaces. It will pay you to investigate VICTOR for the new year . . . there may be an exclusive franchise open in your territory, if you act NOW!

Investigate an Exclusive VICTOR FRANCHISE!

For Bigger PROFITS

MAIL COUPON TODAY!

HALL-NEAL FURNACE CO.
1322-42 NO. CAPITOL AVE., INDIANAPOLIS 7, IND.

HALL-NEAL FURNACE CO.
1322-42 N. Capitol Ave., Indianapolis 7, Indiana.

Gentlemen: Without obligation, please send at once complete information on the VICTOR Coal, Gas, and Oil Furnace line.

NAME_____

FIRM_____

STREET_____

CITY_____ STATE_____

TM—50

BARBER COLMAN

"UNI-FLO" ENGINEERED

Air Distribution

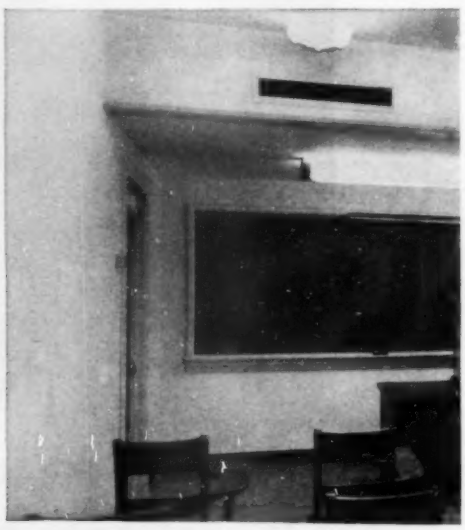
. . . plays important role in air conditioning old and new buildings at SOUTHERN METHODIST UNIVERSITY!

First major university to initiate a comprehensive program for air conditioning classrooms, Southern Methodist University now has comfort cooling in eleven buildings. Another air conditioned building is under construction, two are proposed, and the application of air conditioning to four existing buildings is under consideration for the Dallas institution.

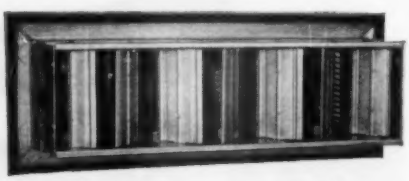
Based upon performance in early installations, thousands of Barber-Colman Uni-Flo Wall Diffusers and Grilles, plus Venturi-Flo Ceiling Diffusers are now providing a healthful, comfortable, draft-free atmosphere for students and faculty. The complete story on finest air distribution equipment made is available from your nearby Field Office or by sending coupon below.

Architect: Mark Lemmon. Consulting Engineers: Zumwalt & Vinther, J. W. Lacy. General Contractors: Henger Construction Co., Robert E. McKee, O'Rourke Construction Co. Air Conditioning Contractors: C. Wallace Plumbing Co., Farwell Co., Martyn Brothers, Inc.





Aerial view of the impressive campus, scene of an enormous postwar building program. Under the leadership of Dr. Umphrey Lee, president, the University has grown rapidly in educational stature as well as in modern housing.



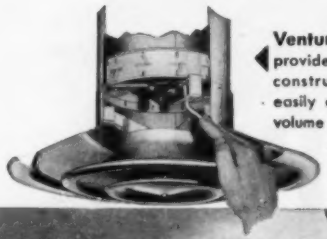
Double Deflection "MA" Sidewall Diffusers were specified for many applications. Features include integral volume control, easily removed cores, rapid diffusion, low noise level.



Fondren Science Building one of the most modern in the nation, located on North Campus. 224 Uni-Flo Sidewall Diffusers and Venturi-Flo Ceiling Diffusers distribute air evenly, quietly.



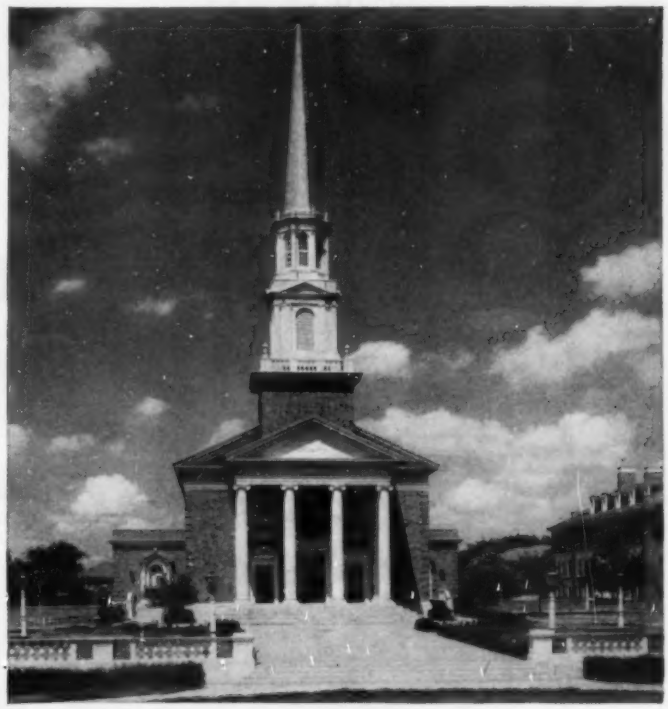
Bridewell Library, Perkins Quadrangle. In this building alone are 141 Uni-Flo Sidewall Diffusers and 63 Venturi-Flo Ceiling Diffusers, all equipped with Volocitrols in supply duct approaches.



Venturi-Flo Ceiling Diffusers provide efficient diffusion, rigid construction, quiet operation, easily adjustable deflection and volume control in units noted for attractive, modern design.



Classroom in Kirby Hall, Perkins Quadrangle. In this new Quadrangle, seven new buildings have been equipped with Barber-Colman Air Distribution products since 1950.



Perkins Chapel where 34 Uni-Flo and Venturi-Flo units assure quiet comfort. Similarly equipped is Highland Park Methodist Church located on the campus—one of the nation's largest Methodist Churches.

BARBER COLMAN

"UNI-FLO" ENGINEERED

Air Distribution

BARBER-COLMAN COMPANY, ROCKFORD, ILLINOIS

Air Distribution Products • Automatic Controls • Industrial Instruments
Aircraft Controls • Small Motors • OVERdoors and Operators • Molded Products • Metal Cutting Tools • Machine Tools • Textile Machinery

BARBER-COLMAN COMPANY, ROCKFORD, ILL., U.S.A.
Dept. A, 1106 Rock St. • Field offices in principal cities

☐ Please send new data bulletin on engineered air distribution equipment, F. 4471-2.

*Name*_____

*Firm Name*_____

*Address*_____

*City*_____ *State*_____



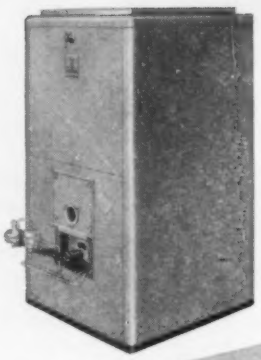
GAS HI-BOYS

6 models: GH-65, GH-82, GH-82E, GH-100 and GH-100E are completely assembled and wired. Model GH-110 assembled, not wired. Ratings up to 110,000 Btu. input.



GAS LO-BOYS

9 models: GL-72, GL-87, GL-87E, GL-103 and GL-103E are completely assembled and wired. Models GL-110E, GL-135E, GL-175E and GL-210E are not assembled. Ratings up to 210,000 Btu. input.



GAS GRAVITY UNITS

3 models: GG-122E and GG-147E are not assembled. Model GG-82E is completely assembled. Ratings: 82,000 to 147,000 Btu. input.

* who could ask

*From I GOT RHYTHM
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New World Music Corporation
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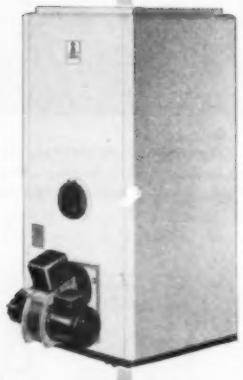
OIL LO-BOYS

9 models: OL-92, OL-92E, OL-111 and OL-111E are completely assembled. Models OL-90E, OL-112, OL-134, OL-168 and OL-224 are not assembled. Ratings up to 224,000 Btu. bonnet output.



OIL HI-BOYS

3 models: OH-84E and OH-96E are assembled. Model OH-95E is available assembled or not assembled. Ratings up to 96,000 Btu. bonnet output.

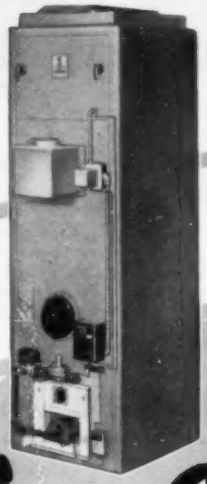


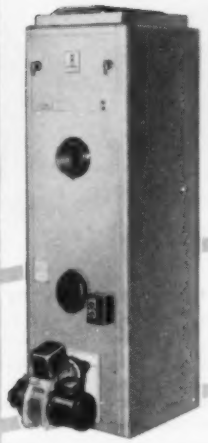
OIL GRAVITY UNITS

3 models: OG-89E is completely assembled. Models OG-126E and OG-15E are not assembled. Ratings up to 157,000 Btu. bonnet output.

GAS COUNTERFLOS

2 models: GR-85E is completely assembled and wired. Model GR-120E is assembled, not wired. Ratings: 85,000 and 120,000 Btu. input.





OIL COUNTERFLOS

2 models: OR-92E and OR-112E. Completely assembled. Ratings: 92,000 and 112,000 Btu. bonnet output.

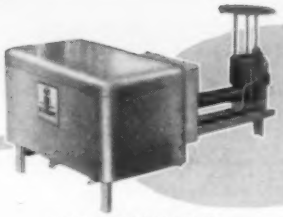
HORIZONTAL UNITS

3 Gas models: GS-60, GS-80, GS-100. Completely assembled and wired. Ratings up to 100,000 Btu. input.

3 Oil models: OS-80E, OS-120E, OS-180E. Completely assembled. Ratings up to 160,000 Btu. bonnet output.



for anything more?



GAS CONVERSION BURNERS

3 models to convert furnaces or boilers—up to 320,000 Btu. input.



OIL CONVERSION BURNERS

2 models, pressure atomizing, with capacity of 1 to 3½ gallons.



SUMMER AIR CONDITIONING UNITS

2 models: SA-2 and SA-3. 2- and 3-ton capacity, self-contained units. May be used with any warm air system.

With the great 1954 International Economy line you've got everything! Assembled or non-assembled oil and gas furnaces with or without vestibule, summer air conditioning units, conversion burners, a complete line of International snap-lock pipe and fittings.

Plus a complete promotional program to bring in those *extra* profits. Why not call your International Economy distributor now! Who could ask for anything more?

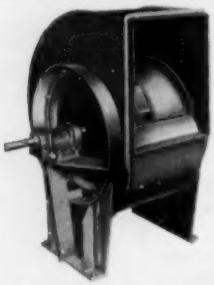
INTERNATIONAL SNAP-LOCK

STANDARDIZED FURNACE PIPE AND FITTINGS

INTERNATIONAL Economy

HEATING EQUIPMENT

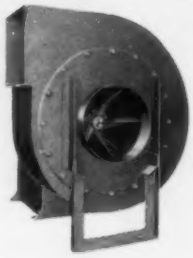
International Heater Company, Utica 2, New York
Western Warehouse: Chicago, Illinois



TYPE NH FANS operate at moderately high speeds. Available in 23 sizes — smaller sizes adjustable as to discharge. Capacities from 1,000 to 725,000 cfm. Wheels have backwardly inclined blades — non-overloading power characteristic.



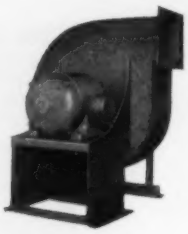
TYPE HV are slow speed, exceedingly quiet fans. 28 sizes offered — smaller sizes readily adjustable to eight standard discharges. Capacities from 200 to 200,000 cfm. Forward curved multi-blade wheels. Unit shown has Vortex Control in inlet.



TYPE XL FANS, with high efficiency characteristic, range up to 130,000 cfm, 18" SP, 60" inlet diameter. Three wheel types, 16 fan sizes — smaller sizes adjustable as to discharge.



TYPE CI EXHAUSTERS are for smaller volume applications — 200 to 3,000 cfm; pressures to 22". Corrosion resisting cast iron housings. All 6 sizes adjustable as to discharge.



TYPE O BLOWERS deliver small to moderately large volumes — 250 to 25,000 cfm — at high pressures. 19 sizes — all adjustable as to discharge. Heavy steel plate construction.

Air Handling and Conditioning Fans

Industrial Exhaust Fans and Blowers

YOU'RE VERY LIKELY to find at Clarage just what you're looking for in air handling and air conditioning . . . highly efficient, dependable equipment — job engineered to your particular needs. You'll profit by choosing Clarage. We have an established reputation for getting things done RIGHT. As evidence of what we mean, 97 of the 100 largest American corporations are users of Clarage equipment. This wide acceptance denotes the high standing of Clarage products. We welcome your inquiry for any desired information.

Air Washers and Unicoil Units

AIR WASHERS available in both spray and capillary types. (Spray type shown.) Capacities from 2,000 to 193,000 cfm. Ideal for comfort air conditioning, dust removal, product reclamation, and where maximum air cleaning efficiency is vital.

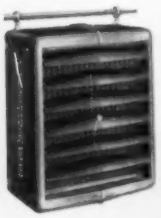


UNICOIL UNITS are recommended as an integral part of a central station system for heating or cooling, or both; or for complete air conditioning in comfort applications. Combine in a single unit all elements required for efficient heat transfer.

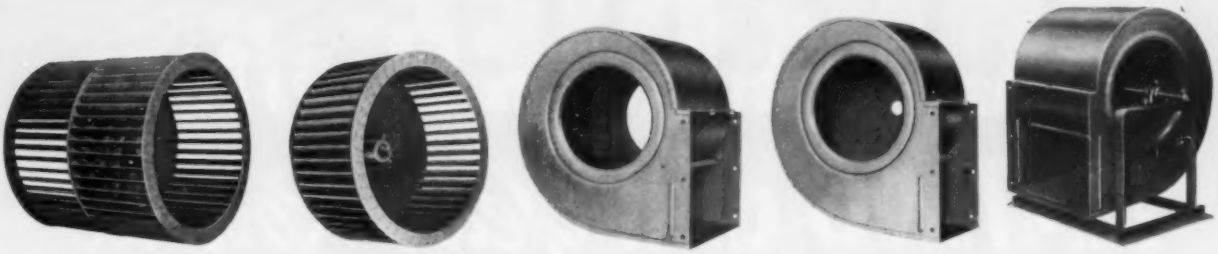


Unit Heaters

UNIT HEATERS, equipped with centrifugal multi-blade fans, are available for either floor or suspended installation. Nine sizes have capacities ranging from 60,000 to 1,160,000 B.t.u. They operate on either steam or hot water. Clarco Heaters, equipped with propeller fans, are for heating smaller areas. Ten sizes, capacities 24,000 to 270,000 B.t.u., both vertical and horizontal types.







TYPE DF FAN EQUIPMENT is available in 11 sizes ranging from 200 to 10,000 cfm. Wheels, housings, or complete units can be furnished for air conditioning units, cooling towers, circulators, evaporative condensers, etc.

Here is rugged equipment — built of heavier gauge steel than ordinary furnace blowers — for trouble-free operation against higher static pressures. Wheels can be peripherally reinforced for meeting still higher static requirements. Hubs having large flanges which stiffen the wheel centerplate are of cast iron and are available in a wide range of stock bores. Housings are designed to assure full rated performance of the wheels.

Wheels and housings can be supplied with hot dipped galvanized construction for protection against moisture. Spark-resistant aluminum wheels also available.

Shown — left to right — standard double wheel, single width wheel, double width housing, single width housing, and complete fan. For more complete information, request Catalog 603-A or call in the nearest Clarage sales engineer.

Wheels, Housings, and Complete Fans for Air Conditioning Units, etc.

You can Rely on...

CLARAGE

Headquarters for Air Handling and Conditioning Equipment

SALES ENGINEERING OFFICES IN ALL PRINCIPAL CITIES • *IN CANADA* Canada Fans, Ltd., 4285 Richelieu St., Montreal

CLARAGE FAN COMPANY, KALAMAZOO, MICH.

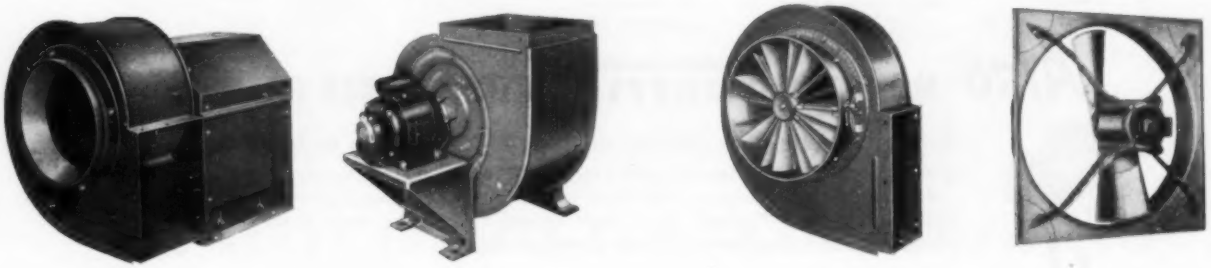
Ready Unit Ventilating Sets

V-BELT UNITS are furnished complete, ready-to-run. They provide exceptionally quiet, economical performance. Available in a wide size range with steel housings. Drive, motor, and bearings contained within framework of unit for safety and protection of working parts. Outdoor covers furnished for full protection of working parts on units exposed to weather.

DIRECT DRIVE UNITS are also furnished complete, ready-to-run. Smaller sizes have cast iron housings; larger sizes have steel housings. They handle small ventilating supply and exhaust jobs of many types. 18 sizes of Ready Units are available—capacities 100 to 12,000 cfm. Specially constructed units can be furnished for a wide variety of applications.

Other Clarage Products

In addition to the fans and units shown here, Clarage makes numerous other air handling and conditioning equipment: **Unit Stoker Fans** shown below left — are built in sizes to meet any volume, pressure, speed. **Propeller Fans** shown below right — for ventilation and exhaust services. **Mechanical Draft Equipment** — heavy duty fans for both induced and forced draft service. **Clarage Vortex Control** shown in fan inlet, left below, can be furnished on practically all types of Clarage fans as an economical, efficient, means of regulating air volume. **Clarage equipment** conforms to standards of the N.A.F.M. and the A.S.H.V.E.



MONCRIEF offers... HEATING and *Year 'Round*

Approved for either GAS or OIL FIRING!

The new, Moncrief year 'round Air Conditioner is one complete, automatic Unit! It Heats in Winter . . . It Cools in Summer.

. . . It's factory assembled. It's only necessary to slide the completely assembled and wired refrigeration unit into the cabinet and make the necessary electric and water connections.

. . . It's remarkably compact! Requiring an unusually small space for installation.

. . . It's competitively priced.

. . . It's approved for either gas or oil firing.

See your Moncrief jobber. Get the story on the unit that builders want for new houses. Get the competitive prices that let you cash-in — with Moncrief.

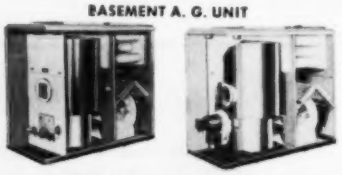
COUNTERFLOW UNIT



As an OIL Unit 84,000 to 123,000 B.T.U. at Discharge Outlet

As a GAS Unit 65,000 to 140,000 B.T.U. Input

BASEMENT A. G. UNIT



As a GAS Unit 70,000 to 250,000 B.T.U. Input

As an OIL Unit 92,000 to 212,000 B.T.U. at Bonnet

UTILITY UNIT



As an OIL Unit 84,000 to 123,000 B.T.U. at Bonnet

As a GAS Unit 65,000 to 140,000 B.T.U. Input

GRAVITY FURNACE



GAS or OIL

SUMMER COOLING UNIT



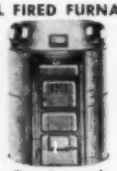
2 Ton and 3 Ton Capacity

HORIZONTAL FURNACES



GAS in 2 SIZES 65,000, 85,000 B.T.U. Input.
OIL in 2 SIZES 84,000, 123,000 B.T.U. at Bonnet

COAL FIRED FURNACES



Gravity and Forced Air Cast Iron and Steel

Gas Fired UNIT HEATER



4 Sizes 60,000 to 170,000 B.T.U. Input

INCINERATOR



2 Bushel with or without Gas

CONVERSION GAS BURNER



3 Sizes 150,000 to 300,000 B.T.U. Input

Also MONCRIEF SUREFIT CARTON PACKED FITTINGS



No. PH3 End Register Box

Quicker to Assemble • Easier to Handle • Quicker to Install

FOR — Small Pipe, Perimeter and Extended Plenum Installations. IN — Basement; Crawl Space; Slab Floor and Utility Room Installations. ALSO . . . Carton Packed. Snap Lock Round Pipe; Snap Lock Wall Stack; Snap Lock Duct. Write for complete catalog.



No. PH2 Register Tee

NOW! With MONCRIEF...Buy EVERYTHING from ONE SOURCE

the Most Complete Line of AIR CONDITIONING UNITS



SUMMER COOLING WINTER HEATING *with the* SAME *unit!*

• • 2 Popular Sizes • •

2 Ton Cooling with Heating Input
100,000 B.T.U. Gas • 105,000 B.T.U. Oil

3 Ton Cooling with Heating Input
140,000 B.T.U. Gas • 165,000 B.T.U. Oil

Approved **for either GAS or OIL**

Never in Moncrief's 60 years of leadership in the heating and air conditioning market has such a complete Moncrief line been available for meeting the wide range of demands for heating and year 'round air conditioning.

With Moncrief you have everything to get any order — everything from the heating or air conditioning unit to all the necessary pipe and fittings for a complete installation — all from one source — the warehouse of your Moncrief jobber.

For the large conversion market you'll have a complete line of Moncrief gas and oil conversion burners to fit any job. And — for the new, big demand for summer cooling — Moncrief has the finest combination units — and separate cooling units for the millions of existing houses.

Let your Moncrief jobber tell you how you can increase your business and increase your profit with this complete "easy-to-sell" line.

THE HENRY FURNACE COMPANY • *Medina, Ohio*

HEATING AND AIR CONDITIONING UNITS — MONCRIEF — FURNACE PIPE AND FITTINGS

COMPARE!

	GRAVITY	LO-BOY	HI-BOY	COUNTER-FLOW	HORIZONTAL
GAS FLO-WARM LINE	4 Models 85,000 to 150,000 B.T.U.	7 Models 90,000 to 250,000 B.T.U.	1 Model 85,000 B.T.U.		
OIL FLO-WARM LINE	2 Models 105,000 to 140,000 B.T.U.	7 Models 105,000 to 250,000 B.T.U.	3 Models 105,000 to 189,000 B.T.U.	2 Models 105,000 to 140,000 B.T.U.	2 Models 105,000 to 140,000 B.T.U.
GASAVER LINE (DUAL CAPACITY)	4 Models 43/85,000 to 75/150,000 B.T.U.	7 Models 50/100,000 to 125/250,000 B.T.U.	1 Model 43/85,000		
OILSAVER LINE (DUAL CAPACITY)	2 Models 105,000 to 140,000 B.T.U.	7 Models 105,000 to 250,000 B.T.U.	3 Models 105,000 to 189,000 B.T.U.	2 Models 105,000 to 140,000 B.T.U.	2 Models 105,000 to 140,000 B.T.U.
GAS ASSEMBLED LINE	3 Models Available Later	4 Models 70,000 to 140,000 B.T.U.	4 Models 70,000 to 140,000 B.T.U.	4 Models 70,000 to 140,000 B.T.U.	5 Models 60,000 to 140,000 B.T.U.
OIL ASSEMBLED LINE	3 Models Available Later	3 Models 100,000 to 145,000 B.T.U.	3 Models 100,000 to 145,000 B.T.U.	3 Models 100,000 to 145,000 B.T.U.	
DUO-FUEL LINE	4 Models 85,000 to 150,000 B.T.U.	6 Models 90,000 to 200,000 B.T.U.			
COAL FLO-WARM LINE	9 Models 65,330 to 163,375 B.T.U.	6 Models 102,000 to 275,000 B.T.U.			

- 113 Different Furnaces
- 5 Distinctive Types
- 8 Different Lines
- Pipe & Fittings for ANY System
- Complete Line of Air Conditioning Units

THE WILLIAMSON HEATER CO.
3511 MADISON ROAD, CINCINNATI 9, OHIO

Gentlemen:

Yes, rush me details on the complete **WILLIAMSON** *Line.*

Name.....Title.....

Firm.....

Address.....

City.....Zone.....State.....

Here's the most complete line of furnaces, fittings and air conditioning units ever offered.

Before you place your 1954 purchases, compare the WILLIAMSON line with the brand you are now carrying. You'll find the comparison well worth your time—profit-wise.

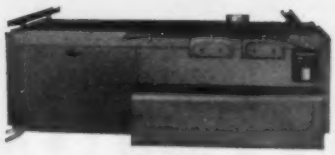
GET DETAILS TODAY!



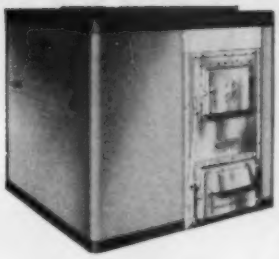
Gasaver Lo-Boy



Oil Flo-Warm Horizontal



Assembled
Gas Horizontal



Coal Flo-Warm

The most
complete warm air
furnace line . . . ever!

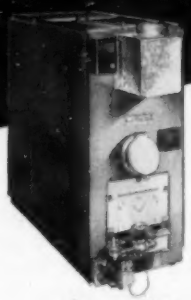
WILLIAMSON
WARM AIR FURNACES



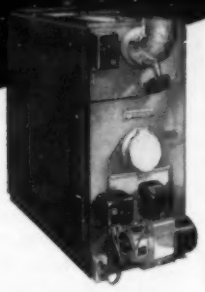
Oilsaver Lo-Boy



Gasaver Gravity



Assembled
Gas Lo-Boy



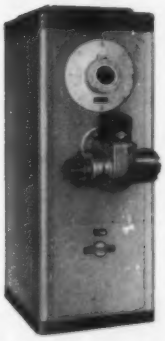
Assembled
Oil Lo-Boy



Assembled
Oil Hi-Boy



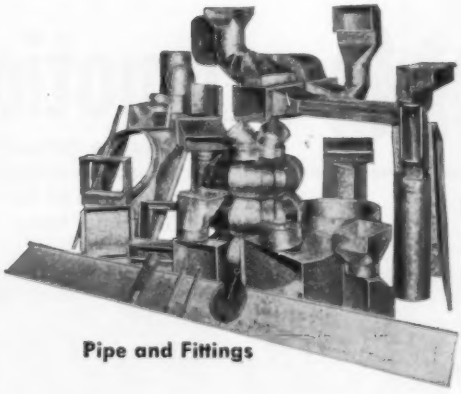
Assembled Oil
Counter-Flo



Oil Flo-Warm
Hi-Boy



Gas Flo-Warm Lo-Boy



Pipe and Fittings



Air Conditioning

Now — the JOHN WOOD "more in '54" plan

more production

more production on every heater in the line ... full stocks at all times to give *you* prompt shipments throughout the year.

more models

in addition to the Deluxe Convertible, Master, Master A, Heavi-duty and Table Top we have the Dual Action water-and-space heater plus the new *John Wood Special,* priced to sell in any market.

more selling features

nipple spread now 8" for your easier handling. Control moved over for easier access to burner. Both Galvanized and Glass linings — a heater for practically any local water condition.

more advertising

Biggest National Consumer advertising program in John Wood's history! Now, *your* John Wood advertising in Better Homes & Gardens plus Home Modernizing plus American Home reaching 7 million circulation *month after month!*

more promotion

hardest-hitting promotion package ever offered by John Wood. Completely ties you in with national advertising plus all the selling materials you need to do a BIG water heater business.

Plus— official sponsorship and endorsement of **Mrs. America** for the complete JOHN WOOD line

with *POWERFUL* GAS COMPANY and AGA localized advertising and promotion support.

...and for 1954 JOHN WOOD introduces....

the new

GLASS-LINED

JOHN WOOD MERION OR PENFIELD

deluxe Automatic GAS WATER HEATERS

NOW—JOHN WOOD, manufacturers of dependable quality products since 1867, adds to its line of dependable water heaters the

finest glass-lined water heater anywhere!

NOW—JOHN WOOD leads the 1954 water heater parade! A complete line, with both galvanized and glass-lined tanks! Aggressive advertising and promotion, including a tie-in with *Mrs. America,* the Gas Industry's liveliest national promotion—everything you need to help *you* "Sell More in '54!"



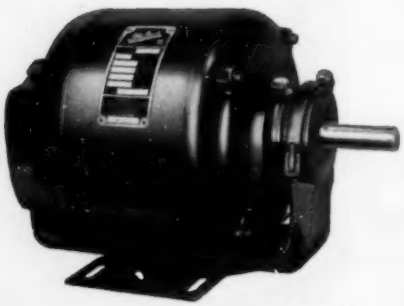
JOHN WOOD

Get the complete story of the JOHN WOOD "More in '54" Promotion Plan!

Ask your Wholesaler!



THE MOST IMPORTANT PERSON IN YOUR BUSINESS...



A COMPLETE LINE OF
RUGGED FRACTIONAL HORSEPOWER APPLIANCE MOTORS

is a *satisfied customer!* And one way to assure satisfied customers is to standardize on Packard electric motors for your electrical appliances.

The motors built by Packard Electric have been well and favorably known for 37 years. There is no better fractional horsepower electric motor on the market. So, when you specify Packard electric motors, you benefit in two ways: Your product will give your customers reliable and long-lasting performance; the satisfaction experienced by your customers will be reflected in greater acceptance for your product.

GM GENERAL MOTORS

Packard

REG. U.S. PAT. OFF. TRADE MARK

Packard Electric Division
General Motors Corporation,
Warren, Ohio

Sell 'em ALL with



TYPHOON

Year-Round

Air Conditioners





There's a size for every home!

Don't miss out on the profitable home air conditioning business. You can compete on every job—large or small—because Typhoon brings you a complete line of year-round units. Oil or gas-fired, water or air-cooled, upright or counterflow—you'll always have the answer with Typhoon S-W Units!

Take the Typhoon way to air conditioning profits — find out about a franchise today.

You Profit 5 Ways with a TYPHOON Franchise

1 CLOSE FACTORY COOPERATION • You deal direct with the Typhoon factory. Every member of the organization — right on up to the president — is ready to pitch in and work with you personally.

2 YOUR PARTNER, THE DISTRICT MANAGER • When the sale hangs in the balance . . . your Typhoon district manager is Johnny-on-the-spot.

3 TOPNOTCH ENGINEERING • Typhoon units are ruggedly built with plenty of reserve capacity.

4 COMPLETE LINE of packaged year-round air conditioners. The right size for every home, large or small. Oil or gas-fired, water or air-cooled, upright or counterflow, competitively priced.

5 REGIONAL TRAINING SCHOOLS • Intensive sales-engineering course by factory experts, conducted in your own territory.

TYPHOON
AIR CONDITIONING

Specialists in Air Conditioning since 1909

TYPHOON AIR CONDITIONING CO., INC.
794 Union Street · Brooklyn 15 · New York

Typhoon Air Conditioning Co., Inc.
794 Union St., Brooklyn 15, N. Y. B-1

I would like to know more about the Typhoon Franchise.

NAME_____

FIRM_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

NIAGARA

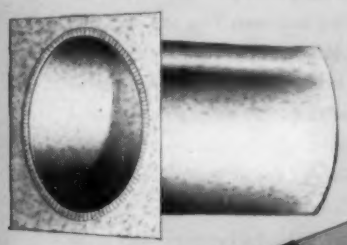
ROTARY MACHINES *for* SHEET METAL WORK

BEADING
CRIMPING
ELBOW EDGING
BURRING
TURNING
FURNACE COLLAR EDGING
WIRING
FLANGING
SETTING DOWN
SEAMING
SLITTING
SPECIAL

NEW FURNACE COLLAR EDGING ROLLS



No. 164 Universal Rotary Machine with Furnace Collar Edging Rolls



Pipe inserted and hammered flat

Write for Bulletins 75 and 85



NIAGARA MACHINE & TOOL WORKS • BUFFALO 11, N. Y.

America's Most Complete Line Presses, Shears, Machines and Tools for Sheet Metal Work

DISTRICT OFFICES: DETROIT • CLEVELAND • NEW YORK

Plan NOW for summer profits... from



...the important new Summer advertising+selling campaign for the new

Rheem ROOM AIR CONDITIONER



Here is a new opportunity. Let this page start you planning NOW for a big new profit! Don't wait for the summer rush. The new Rheem Room Air Conditioners, famous products of a famous manufacturer, have no superior in the air conditioning field. They have great advertising points, great selling points. And they *deliver* all that they promise in the big advertising campaign, now ready for summer use in newspapers, radio and co-operative sales literature. Send the coupon now for full details of profits, product and advertising support!

Send coupon today—sure profits this summer!

You can rely on

RHEEM MANUFACTURING COMPANY

Sparrows Point 19, Maryland
7600 S. Kedzie Ave., Chicago 29, Ill.
1025 Lockwood Dr., Houston 20, Texas
4361 Firestone Blvd., South Gate, Calif.
800 Chesley Ave., Richmond, Calif.
3693 E. Marginal Way, Seattle, Wash.

Rheem

RHEEM MANUFACTURING COMPANY AA-1

Send your request to nearest Sales Office, addresses of which are listed at left.

Please send full information on Rheem Room Air Conditioners.

NAME_____

ADDRESS_____

CITY_____ STATE_____



SEQUOIA

"deals" in just one kind of furnace: gas-fired, forced air, for residential and light commercial heating. Three models in sixteen sizes give dealers the complete range of equipment they need . . . with no costly-to-stock extras, and no job-losing gaps. This unique specialization is backed by one all-important promise:

advanced design, superior quality . . . at competitive prices.

Sequoia's concentration on just one kind of furnace of all the "know-how" developed in the design, building and selling of tens of thousands of units, assures you of that same unmatched value again in 1954.

There's always a place in Sequoia's nation-wide sales organization for the jobber or dealer who seeks honest value, rather than price alone; who appreciates the importance of performance, and knows the cost of chronic "call-back" makes; who prefers to work with a factory that backs its products, and its dealers . . . *ALL THE WAY!*

If this description matches your business policy, you'll want full details on all three of these Sequoia furnaces—



CLOSETEER

The industry's only wide-face, extreme shallow depth, average height furnace. Zero-zero clearances. Eight sizes, 65-to-200,000 BTU.



REV-FLO

Three reverse-or counter-flow models for perimeter systems . . . 80, 100 and 120,000 BTU . . . all with *Closeteer's* same exclusive dimensional advantages.



HORIZONTAL

Space-saving design . . . the industry's widest range of sizes—70, 80, 100, 120 and 150,000 BTU models.

Look ahead to tomorrow by writing or wiring today. The nearest sales office will provide complete information—or, if you prefer, contact the factory direct.

RICHMOND, VA., Jack Muther, 1504 Belleville St.
BIRMINGHAM, ALA., W. M. Dunbar & Co., 1720 Second Ave.
NEW ORLEANS, John A. Davis, 1016 Chapelle St.
ST. LOUIS, J. R. Layton, 1374 Louisville Ave.
OKLAHOMA CITY, Guy W. Gentry, Box 7131
PASADENA, CALIF., Glenn A. Barnes, 15 N. Oakland

Sales Department

SEQUOIA MANUFACTURING CO.

1000 Brittan Avenue · San Carlos 3, California

Stocks maintained in Richmond, Va.; Birmingham, Ala.; and Los Angeles, Calif.



It pays to "Meet the Family" of the First sheet metal screw

THE ORIGINAL PARKER-KALON TYPE A

For fastenings to light gage (.015″ to .050″) sheet metal. Also made in Stainless Steel (18-8). The favorite of fastening-wise sheet metal men for over 30 years.



P-K TYPE Z* For fastenings to light and heavy gage sheet metals (.015″ to .200″). Also made in Stainless Steel (18-8). The right combination of hardness and toughness in every screw. * A. S. A. — TYPE B



P-K HEX HEAD TYPE Z* For fastenings to light and heavy gage sheet metals (.015″ to .200″) and structural steel (.200″ to ½″). Has many applications in fabricated steel buildings. * A. S. A. — TYPE B



HARDENED P-K SCREWNAIL For fastening sheet metal to wood. Screw strength and nail speed in one fastening. Hardened, it pierces metal that would bend ordinary nails—has 4 times the holding power.



HARDENED P-K MASONRY NAILS For fastenings to brick, mortar, concrete, etc. Drive them with a hammer in a drilled hole of proper size—drive without holes in softer masonry. Quicker than lead anchors and expansion bolts. Hold securely, cost less.

There are still *more* P-K Fastening Devices that are just right for certain jobs. Be sure you know them all—start making savings you've missed.

DELIVERIES ARE BETTER . . . SPECIFY P-K



GET COPIES OF BOOKLETS NO. 480 and NO. 412

"HOW TO USE" booklet tells "where to use what" type of screw in all kinds of sheet metal. Gives complete information on application.

SCREWNAIL and MASONRY NAIL Booklet tells how these popular fasteners can save you money. Ask your P-K Distributor for Forms 480 and 412, or write Parker-Kalon Division, General American Transportation Corporation, 200 Varick St., New York 14.

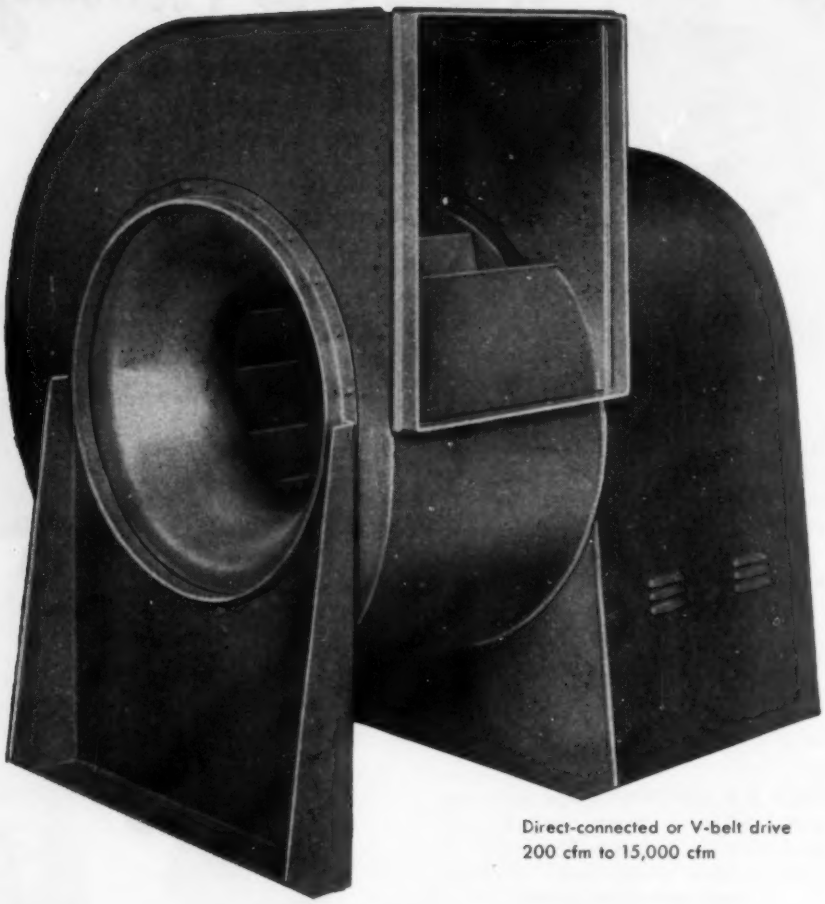
PARKER-KALON®

The Original **SELF-TAPPING SCREWS**

AND OTHER FASTENING DEVICES

NEW!

ALL-PURPOSE VENTILATING SETS YOU CAN PUT INTO SERVICE FAST!



Direct-connected or V-belt drive
200 cfm to 15,000 cfm

Here's a new line of Westinghouse motor-driven ventilating sets. They are ideal for general purpose ventilation, for exhaust, for processes, and for removal of heat, fumes and vapor.

Where changing plant or building conditions create an unexpected need for ventilation, these sets are a quick solution. Here's why:

COMPACT SIZES—down to 10" x 12" x 16"—take little space, are easy to install.

SINGLE UNIT—fan, motor and drive all made and assembled by Westinghouse.

DIRECTION OF DISCHARGE—can be changed on the job.

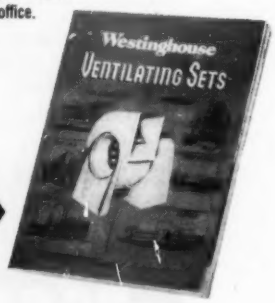
LOW MAINTENANCE permits use of out-of-the-way locations.

WEATHERPROOF COVERS permit outside installation.

SHORT DELIVERIES get your job started sooner.

These ventilating sets are low in first cost, low in operating cost. You get a single warranty because fan and motor are both built by Westinghouse.

For other exclusive features and full information, ask for Catalog 1160. Call your local Westinghouse-Sturtevant office. Or, write Westinghouse Electric Corporation, Sturtevant Division, Hyde Park 36, Massachusetts.



WESTINGHOUSE AIR HANDLING

J-80317

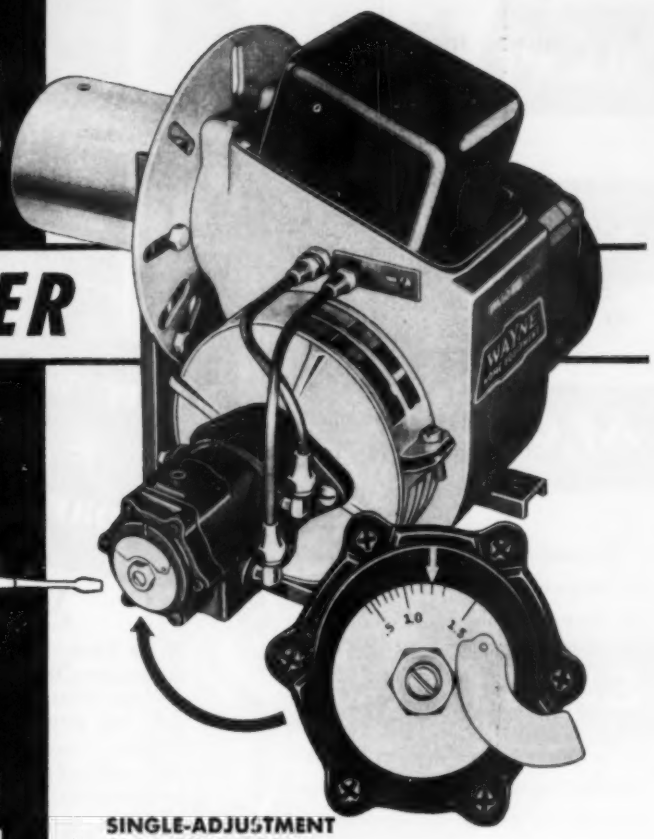
YOU CAN BE SURE ... IF IT'S Westinghouse

WAYNE

DIAL-O-METER

Low Pressure
OIL BURNER
DIAL
OIL and AIR ADJUSTMENTS
while the burner is operating

The revolutionary LOW-PRESSURE oil burner with VISIBLE rating dial that permits precise rate settings WITHOUT MESSY MEASURING. You SEE the rating on the DIAL-O-METER!



SINGLE-ADJUSTMENT DIAL WITH COVER & HEX LOCKNUT

Model EL

- **DIALS EXACT FUEL RATINGS FROM 0.4 THRU 1.5 G.P.H.**
- **TWO-STAGE SUNDSTRAND FUEL UNIT**
- **POSITIVE START, CLEAN SHUT-OFF**
- **LIFTS OIL UP TO 17 FEET**
- **NO EXTRA LIFT PUMP REQUIRED**
- **EXTERIOR PRIMARY AIR ADJUSTMENT**
- **STANDARD, EASILY AVAILABLE PARTS**

Write for Catalog Section Ab

WAYNE HOME EQUIPMENT CO., INC.
801 GLASGOW AVENUE
FORT WAYNE 4, INDIANA

with new **WAYNE**

DIAL-O-METER

— the LOW PRESSURE — LOW PRICED — HIGH EFFICIENCY oil burner that brings low-pressure oil firing into competitive selling range. Outstanding in producing record low fuel cost for conversions or on original equipment.

DEALERS! WHOLESALERS! GET THE FACTS

Please Rush Data On: Date_____

☐ **DIAL-O-METER Low-Pressure OIL BURNER**
☐ **OIL-FIRED FURNACES** ☐ **Hi-Pressure BURNER**

Name_____

Company_____

Address_____

City_____ State_____

Purposes of the National Heating Wholesalers Association, Inc.

To cooperate with the Manufacturers and contracting dealers to the end that a maximum accomplishment of both sales and service objectives may be reached.

To promote sound, efficient and progressive practices in the administration and management of Heating Wholesalers.

To meet nationally and regionally as frequently as possible to discuss the business problems of its members and seek satisfactory solutions thereto.

To promote cooperation and the regular exchange of information and experiences among its members.

To serve as an inter-com for its members in Washington, D.C.

To receive members opinions, to correlate them with opinions received from others who know the problems equally well — and to present them to the legislators and agencies in Washington, D.C.

To develop correlated facts and point out the economic effects of the wholesaling function to the consuming public.

To serve and act in and for the interests of members as business men, who could not when acting individually deal with all the complex problems from which the public interest could best be served.



he solves your inventory problems

Your wholesaler is actually a partner in your business. He is in business to help you make money . . . and frankly, if he didn't do just that, there wouldn't be much point to his existence. One big way he helps is by carrying your inventory for you.

Heating contractors and dealers regularly use over thirty sizes and types of furnaces and boilers alone to satisfy common heating requirements. Few dealers can carry enough inventory to fill all of those needs, so it's only practical to rely on your wholesaler to have a wide range of units in stock. By buying from the wholesalers, dealers can have any size heating unit, in any type, with any accessories they need—*at once.*

Wholesalers Eliminate Stock Problems

When a dealer buys from his wholesaler, he not only gets immediate availability from a complete stock inventory, he also avoids a lot of problems. He doesn't have money tied up in inventory, so he's ahead by the amount of interest on that money, and the space he has to provide for that inventory. He doesn't have the headaches of trying to anticipate demands—or the heartaches that come from guessing them wrong. The dealer who buys from his wholesaler eliminates the correspondence and paper work that goes with factory purchases—and the problems of shipping, delays in transit, and damage claims. Obsolescence from model changes never bothers him. His partner, the wholesaler saves him hours of valuable time—hours and hours of worry every month . . . and hours mean dollars.

It Pays to Buy from Your Wholesaler

It's easy to say, "eliminate the middleman," but it just doesn't work. Someone has to perform the services, and your wholesaler is equipped to do so with maximum economy. Wholesalers are more than worth every cent of their charges in terms of not only service for their dealers, but in actual cold cash. If dealers didn't actually profit by buying from them, these "middlemen" would long since have been out of business.

One of a series of advertisements presented in the interests of heating wholesalers all over America by THE HEIL CO., makers of HEIL Automatic Heat. This series is prepared in co-operation with the National Heating Wholesalers Association and the Central Supply Association.

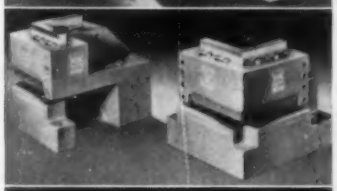
WHAT WALES LEADERSHIP THROUGH CONTINUING RESEARCH and DEVELOPMENT *means to you*



1928 WALES *Strippits* revolutionize die making by providing a spring held compressed by a retainer to standardize stripping pressures.



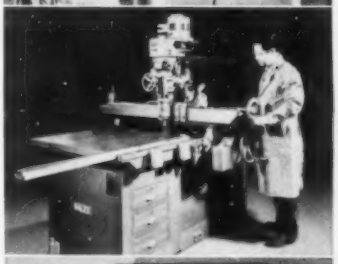
1932 WALES *Self-Contained Hole Punching Units* incorporate the basic Strippit principle to provide free-floating punch and guide for independent design.



1936 WALES *Self-Contained Notching Units* are an outgrowth of the successful applications of Wales Hole Punching Units and Wales Strippits.



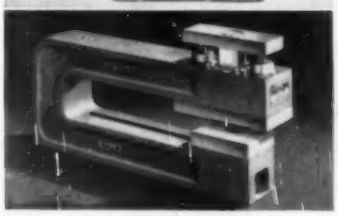
1943 WALES *Fabricators* provide rapid interchangeability for punching, notching and nibbling . . . no templates required. Work from prints or operation sheets.



1946 WALES *Drilling Machines* are designed to meet precision requirements of locating, drilling, boring and reaming holes . . . no other drilling machine or jig borer like it.



1951 WALES *Hydra Springs* utilize the compressibility of Wales Comproils to provide up to 600% more pressure than conventional springs.



1952 WALES *Hydra-Strip Hole Punching Units* with built-in Wales Hydra Springs permit these self-contained Units to punch and strip material up to 3/4" thick.



195–

● This chronological array of Wales patented equipment is only a partial list of the numerous exclusive products developed through years of research by Wales Engineers.

That is one of many reasons why thousands of manufacturers have made it a standard practice rule to standardize on Wales developments. You, too, will be years ahead in time-saving, money-saving production techniques by putting Wales Equipment to work in your plant.

To assist you, Wales Sales Engineers are strategically located throughout the country. These engineers are more than just "factory trained" . . . they have been employed by this Corporation for years before servicing prospects and customers.

For further information on how WALES products will modernize your operations, write for illustrated catalogs TODAY.

WALES-STRIPPIT CORPORATION

George F. Wales, *Chairman*

369 Payne Avenue, North Tonawanda, N. Y.

(Between Buffalo and Niagara Falls)

Wales-Strippit of Canada, Ltd., Hamilton, Ontario

Specialists in Punching and Notching Equipment

NIAGARA UNITS *Simplify* Year-Round Air Conditioning Installations for Homes ANYWHERE

Warm Air Furnaces . . . Refrigerated-Air Home Coolers

With Niagara's extensive lines of gas, oil and coal furnaces and electric cooling units you can ideally meet the requirements for year-round air conditioning in **any** home — **anywhere.** By combining a Niagara home-cooling unit with any Niagara forced air furnace you provide the home owner with circulating warm air in the winter and circulating cool, dehumidified air in the summer. This is the most simple, most economical, most effective way of providing **year-round** air conditioning.

To meet air conditioning requirements for any home, Niagara gives you:

For Homes with Basements • GAS-FIRED FURNACES • For Homes without Basements



Series 50 AC CAST IRON



Series 40 AC STEEL

Niagara Series 50 furnaces are equipped with the exclusive Niagara cast-iron heat exchanger, famous for dependable long-time operation with low gas bills. Deluxe Series 50 AC models have 3-speed direct-drive blower — standard models, single-speed, belt-drive blower. Also available in gravity models. Sizes range from 75,000 to 180,000 BTU input.

Niagara Series 40 furnaces have exclusive Niagara-made alloy steel heat exchangers. Blower-filter unit of AC models may be installed on either side (shown above at left side of heating unit). Also available in gravity models. Sizes from 60,000 to 140,000 BTU input.

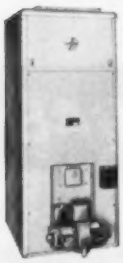


Series 40 DFAC Down-Flow



Series 40 VAC Hi-Boy

The series 40 line of high-boy winter air conditioners includes down-flow types for perimeter heating systems, and conventional up-flow units. Exclusive Niagara-made alloy steel heat exchanger. Sizes from 50,000 to 115,000 BTU input.



Model 60-75 DFAC



Model 60-75 VAC

OIL-GAS CONVERTIBLE: For Homes with or without Basements

Designed for the economical use of oil, Niagara Series 60 convertible furnaces are exceptionally compact and can easily be converted to gas when desired — with a Niagara gas conversion burner. Equipped with exclusive Niagara-made steel heat exchanger of new, space-saving, rectangular design. Line includes vertical down-flow and up-flow complete winter air conditioners.

The blower-filter unit of 60 AC models may be installed on either side. Gravity models also available.

Series 30 furnaces are complete winter air conditioners of the basement or "low-boy" type. Deluxe models have 3-speed direct-drive blowers; standard, single-speed, belt-drive. Sizes from 105,000 to 210,000 BTU.



Model 60-75 AC



Series 30 AC

Coal-Fired Furnaces

Efficient, durable cast-iron Niagara coal furnaces are available in three styles: Square cabinet and round casing gravity furnaces, and rectangular forced-air furnaces.



Coal-Fired Forced-Air



Coal-Fired Gravity

. . . and Summer Air Conditioning in its Most Effective, Economical Form

Niagara refrigerated-air Home-Cooling Units make the supreme comforts of year-round air conditioning practical and economical in all homes that are heated by forced-air systems. The units are designed to use the blower, filter and ductwork of the heating system for the distribution of cooled air in the summer. Units of 2-ton and 3-ton capacity occupy less than 6 sq. ft. of floor space.

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THE NIAGARA FURNACE DIVISION
THE FOREST CITY FOUNDRIES COMPANY
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HOME-HEATING EQUIPMENT MANUFACTURERS SINCE 1890

"There's more to this than meets the A.I.S.I."



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You purchase stainless sheets on a weight basis. You order by gauge number, with permissible A.I.S.I. thickness variation plus or minus 10%. A standard 18 gauge 36"x120" sheet, with theoretical weight of 63.00 pounds, could permissibly vary between 59.22 and 65.52 pounds—and if you order 18 gauge, needing about .0475" thickness, you may receive sheets .052" thick. But MICRO-ROLD STAINLESS GIVES YOU MUCH BETTER CONTROL OVER THIS FEATURE FACTOR . . . MicroRold may be kept within a 3% tolerance.

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puts money in your pocket



The *extra* money we put into Armstrong furnaces bears dividends for *you.*

You can figure *gross* profit at the end of the day you sell any furnace. But it's in your annual figures that the real profit — the *net* — shows up. The *net* profit is the money you put in your pocket. The *gross* melts away fast when you have installation troubles, when assembly time is long, when free adjustment and service are excessive, and when deterioration is rapid.

What *is* quality? Much of it is hidden. You never really see it; it has to prove itself. And it does, in Armstrong furnaces. It shows up in durability, in efficient operation, in complete customer satisfaction. Its value comes back to you by reducing your costs *after* the sale — the costs which cut your *net* profit.

For instance, why does the Armstrong finish hold up so well? For a number of reasons. After cabinet panels are formed, the metal is thoroughly heat-cleaned to provide a surface which "grips" the enamel — leaves no cracks or pin-holes. Then enamel is sprayed on both sides (not just the side your customer sees), and baked on. Then the finished job is critically inspected. That type of care is used in every step of the manufacture of every Armstrong furnace.

Yes, it's costly to us . . . but it's profitable to you.

Armstrong distribution, too, is designed with dealer profit as a keystone. Ask your nearby Armstrong wholesaler for as pretty a profit picture as you'll ever see.



Wherever you are

YOU'RE ON THE ARMSTRONG MAP
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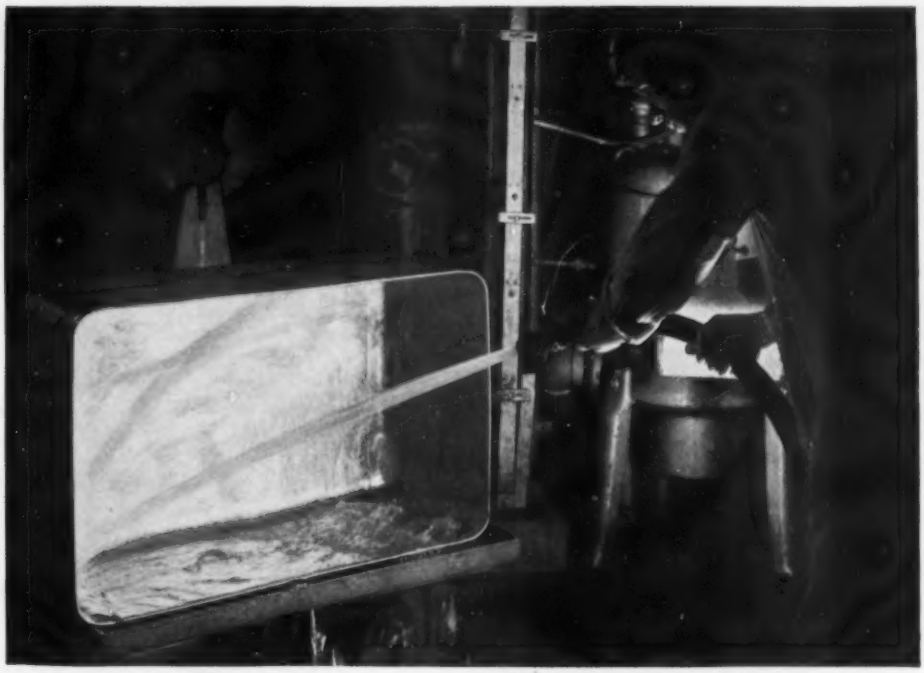
Armstrong's two huge plants serve both sides of the continent quickly, economically. A warehousing distributor, with a complete Armstrong inventory, is within a stone's throw of *everywhere.* Wherever you are, Armstrong's distribution system is set up to serve you. It's better, quicker, more profitable . . . for you.

Please address Dept. AA at our plant nearest you.

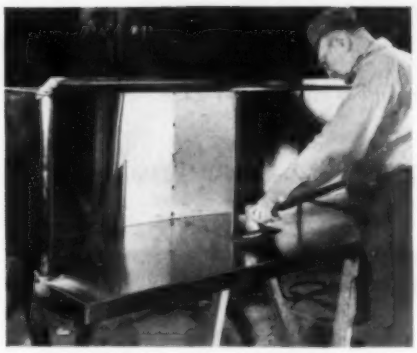
ARMSTRONG
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COLUMBUS, OHIO — **DES MOINES, IOWA**

Warm-Air Furnaces—Gas, Oil, Coal—A Complete Line



Sell this Ease of Cleaning and you'll sell more Enduro Equipment



ENDURO Stainless Steel is easy to fabricate with your present equipment. Republic will be glad to explain any slight changes in methods and procedures necessary to turn out high quality stainless fabrications . . . at a good profit.

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You can tell your customers that a simple warm water rinse usually gets ENDURO equipment shining clean. Occasionally, some more stubborn materials may require somewhat stronger cleaning compounds or a quick brushing. Not often, though.

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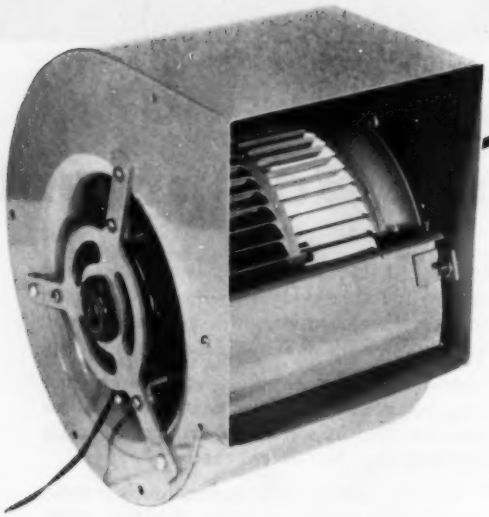
Republic
REPUBLIC STEEL
ENDURO STAINLESS STEEL

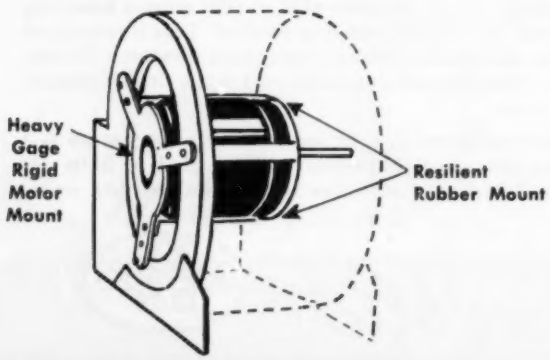
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MINIMIZE NOISE AND VIBRATION

- Motor is mounted on live resilient rubber
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- Belt and pulley noises are eliminated

SAVE SPACE

- Compact design motor is mounted inside the blower
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The Morrison Direct Drive Blower is made in six sizes — with or without speed control.

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That's why a galvanized steel sheet has less tendency to buckle or kink in handling. Less bracing is needed. Longer unsupported sections can be used. And there is better resistance to damage from rough handling.

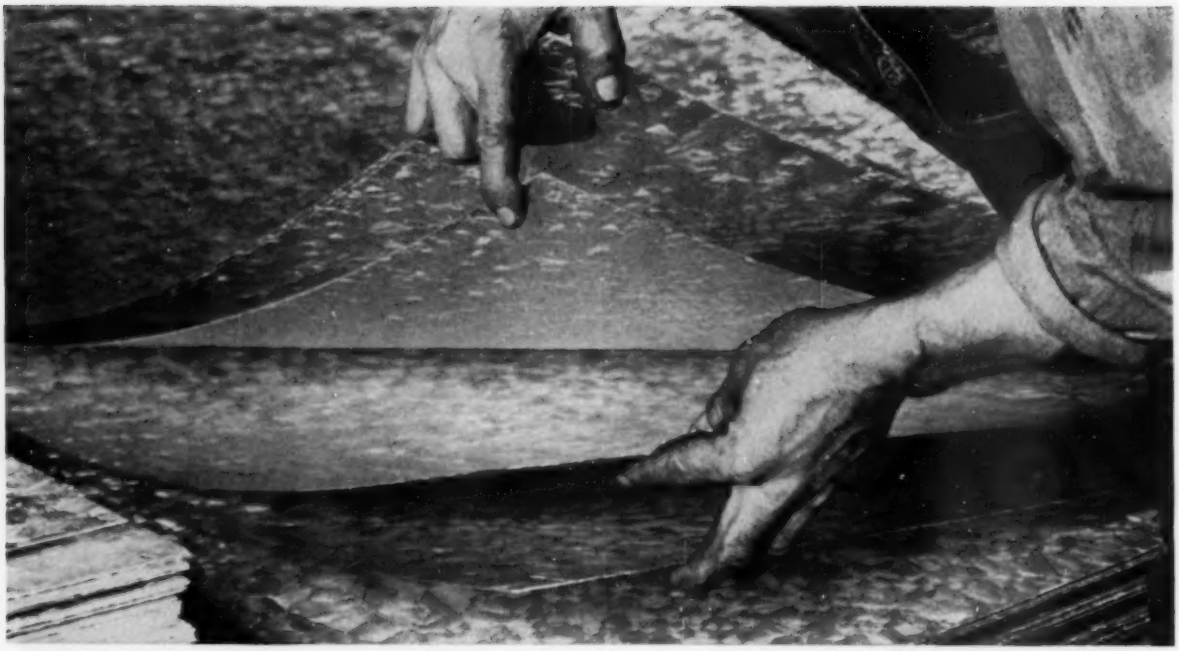
Bethlehem galvanized steel sheets are made from strong, durable steel, either plain or copper-bearing. Tight, uniform zinc coating guards them against corrosion. They are easy to cut, form, seam and solder. And they give a bright, clean look to any kind of sheet-metal job.

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AMERICAN ARTISAN

Looking Ahead for '54

THE NATIONAL Warm Air Heating & Air Conditioning Association held its annual convention in Cleveland early last month. Members came from the far corners of the United States and Canada. (See the Artisan's complete report on page 102.) We talked with many of these businessmen to find out what their plans are for the year ahead.

Their views indicate that 1954 will be another good year for the industry — perhaps not quite as good a year as 1953, but certainly a far better one than was predicted last summer. These businessmen — in general — told us they were making plans to maintain the same dollar volume during 1954 as they had throughout 1953. This, they admitted, would require more effort to reach prospects, to further develop the desire for warm air heating, and to close more sales by conducting more intensive merchandising programs.

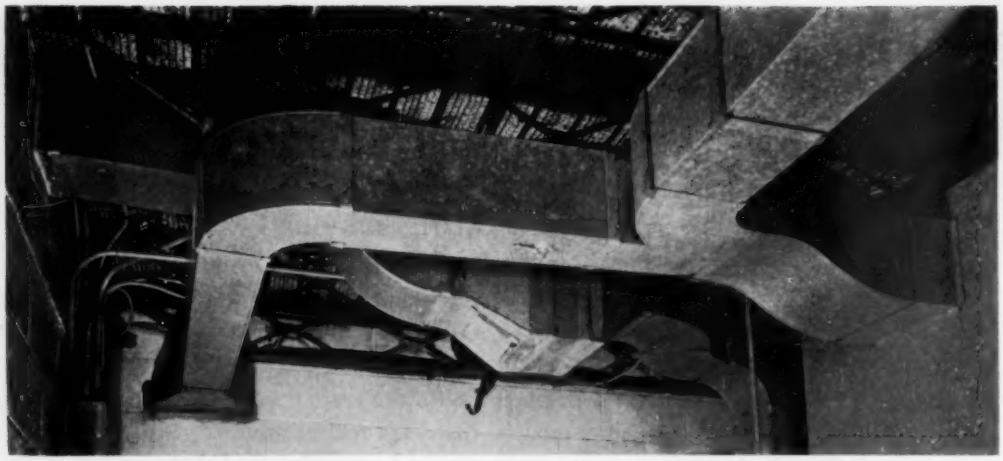
These businessmen firmly believe that prospects are willing to buy better heating than they now have — but that special effort will have to be made to persuade them to sign the contracts. They believe that the money for modernization of heating plants will be available to the average home owner during 1954.

Many dealers and wholesalers of warm air heating equipment indicated that they were planning to round out their selling programs by adding several products that they had not previously devoted particular attention to. Of course, those who have not done much summer cooling are planning to give more attention to this phase of residential air conditioning. The great upsurge in the demand for air cooling during the past two summers is responsible for this decision. These dealers realize that this equipment will not sell itself, but that a campaign must be conducted that will tell the prospective builder of a new house — as well as the owner of an existing home — about the benefits of summer cooling for his home and where he can obtain the best advice regarding this type of equipment.

Many owners of old and outmoded heating plants are in need of information about how their installations can be modernized. An effective way to reach these prospects is by an intensive merchandising program in which advertising and all the other tools of salesmanship are essential parts.

One manufacturer told us that he had recently received from a large city three letters in one week, in which people inquired as to the address of a warm air heating dealer who handled his company's furnaces. He wondered how many more prospects were waiting just to be told a telephone number or an address that would let them know whom to contact for the modernization of their equipment.

A few hours of planning now, at the beginning of the new year, will result in more business and more profits for warm air heating and residential air conditioning dealers, and for sheet metal contractors too, as 1954's months roll by.



OPENINGS FOR obtaining outside air for ventilation (such as the one above made in the above-grade basement wall) do not affect the heat loss of the house itself. However, they increase the furnace capacity required

How Much More Heat Needed for Outside Air Intakes?

By Guy Voorhees
Technical Secretary, NWAHACA

This Article Offers Methods and Data Necessary

1 To Calculate Required Bonnet Capacity for Heating (Without Outside Air Intake).
- **In certain cases (described) bonnet capacity will be the same as total heat loss.**
- **In other cases (insulated ducts in attic, uninsulated ducts in unheated basement) bonnet capacity equals total heat loss multiplied by a given factor.**

2 To Calculate the Air Volume Needed
- **For conventional systems, if the furnace is generating enough to produce the required bonnet capacity (as determined in 1, above), the cfm should be such that the temperature rise through the furnace will be about 100 F.**
- **To find how much 70 F air should be circulated, multiply bonnet capacity by the cfm factor corresponding to the desired temperature rise through the furnace (as shown in Table 2).**

3 To Calculate How Much Capacity Must Be Added for Intake Air.
- **Estimate volume (cfm) of ventilation air to be introduced (often assumed to be 1.5 times the heat loss of the home expressed in thousands of Btu per hr)**
- **Determine temperature of the ventilation air.**
- **Find the additional heat needed to warm this air from a reference table (Table 3).**

THE QUESTION is frequently asked, "Will the heat loss of the house be increased if I install an outside air intake tapped into the return air plenum so that from 10 to 20 per cent of the air passing through the furnace comes from outside the building?" The answer to this question is that the practice of supplying outside air will have no effect on the heat loss of the house itself. But, contrary to a common belief, it does increase the quantity of heat which the furnace must supply.

It has often been argued that when even a relatively small quantity of outside air is introduced into the air circulating system through an outside air intake, the furnace blower will "push" it up into the house and will produce and maintain an air pressure in the rooms which is higher than the outdoor atmospheric

This article was prepared by Mr. Voorhees in response to a special request by American Artisan.

pressure. It had long been supposed that this positive air pressure inside the house would prevent infiltration of outdoor air into the building through cracks around windows and outside doors — that there would be exfiltration (outward air leakage) instead of infiltration. Consequently it has been the belief of many capable heating men that the volume of air brought in through the outside air duct is only about the same as would otherwise have entered by infiltration through window and door cracks anyway.

In other words, they felt that the direct introduction of the cold outdoor air into the recirculating system would not mean any increase in the total quantity of such outdoor air entering the house — the only difference would be the path it travels to get in. Without the outside air intake, it would enter by infiltration — with the outside air intake, it would follow a path through the blower and furnace to get into the rooms. Logically then, it was believed that there would be no difference in the quantity of heat which the furnace must supply to warm this outdoor air up to the normal room air temperature.

Need More Heat

In recent years an increasing number of dealers who have made a practice of installing such outside air intakes on some of their installations have been raising questions about this matter. Even aside from cracks around windows and outside doors, the average house is anything but airtight. Unless the furnace room is almost hermetically sealed off from the rest of the house, any attempt to build up pressure in the rooms results in quite large air leakage through the crack around the door leading into the heater room and thence up the chimney.

Because there have been these and other very definite indications that no pressure is actually built up inside the house to stop infiltration, one of the projects assigned by the National Warm Air Heating and Air Conditioning Association to the warm air heating research staff at the University of Illinois was a careful investigation of this question. Tests made in Warm Air Heating Research Residence No. 2 showed two main things about air brought in through an outside air intake and into the return air plenum: First, it did not build up any air pressure inside the house to check infiltration; second, it definitely did add to the quantity of heat which the furnace had to supply.

Heating contractors who have learned of these carefully controlled tests which confirmed their hunches are now asking how to estimate the increased quantity of heat which the furnace must supply when a part of the air is brought in directly from out-of-doors through an outside air intake.

Following is a procedure which can be followed for residences and similar buildings of moderate size where the heat loss of the building does not exceed about 200,000 Btu per hr.

In those areas where local laws or ordinances require quite large volumes of outdoor air for ventilation in schools or churches of any appreciable size, the following procedure would hardly be adequate to take care of the complications involved. But it has proved successful and satisfactory in meeting ordinary demands.

Calculating Bonnet Capacity

The following method can be used to calculate the furnace bonnet capacity required for heating — without outside air intake: First, calculate the total heat loss of the building by any reliable method. Basically, this is the method recommended by the American Society of Heating and Ventilating Engineers. For the benefit of warm air heating contractors and others, this engineering method has been simplified and clearly explained in great detail in Manual 3, issued by the National Warm Air Heating and Air Conditioning Association.

Where the duct system runs through heated rooms or other heated spaces (such as totally enclosed and heated crawl spaces) the heat losses of which are included in the total heat loss calculation, the required furnace bonnet capacity for heating by recirculation and without an outside air intake is the same as the total calculated heat loss of the building. This also applies when the warm air ducts are run through fully heated basement rooms the heat losses of which have been calculated and included in the total heat loss of the structure.

If the warm air ducts are embedded in a concrete slab floor and the heat loss of the floor is included in the total calculated heat loss of the house according to rules in NWAHACA Work Sheet Forms 41 and 42, the required furnace bonnet capacity for heating should be equal to the total calculated heat loss of the building.

If an uninsulated duct system runs through a fully enclosed, unheated basement, it is common practice to assume that 15 per cent of the heat available at the furnace bonnet will be "lost" between bonnet and register. (This applies only to forced circulation. For gravity heating the assumption originally was that only 75 per cent of the heat at the furnace bonnet was available at the register — a loss of 25 per cent based on bonnet capacity.) For a forced air system the most convenient way to arrive at the bonnet capacity is to either divide the total required register delivery (calculated heat loss of house) by 0.85 or multiply it by 1.18 when the ducts run through a totally enclosed unheated basement.

If insulated ducts run through an attic or a fully ventilated crawl space it is common practice to find the required furnace bonnet capacity for heating by multiplying the total calculated heat loss of the house by 1.33. The very reasonable question is frequently asked, "If the warm air duct is *insulated*, why is it necessary for the furnace to supply 33 per cent more heat at the bonnet than is called for at the register?" The answer is that there is no generally accepted standard of "adequate" insulation of a warm air duct running through a cold space. The factor 1.33 assumes that 75 per cent of the heat available at the bonnet is actually delivered at the register. If

the unheated space is not too cold or if the insulation is more effective than the average either in type or thickness, the heating dealer may select some other factor to compensate for the loss between bonnet and register.

For convenience in determining the furnace bonnet capacity required when the heat loss of the house (required heat delivery at the register) is known, Table 1 is offered. In this table, heat quantities are expressed for convenience in *thousands* of Btu per hr (abbreviated Mbh). Column 1 gives the calculated heat loss of the house and the other six columns are for the convenience of the user in estimating the proper furnace capacity to specify.

TABLE 1—REQUIRED FURNACE BONNET CAPACITIES by per cent of heat loss between bonnet and register

Calculated Heat Loss of Building (Mbh*)	Per Cent of Furnace Bonnet Capacity Lost between Bonnet and Registers					
	5%	10%	15%	20%	25%	30%
	Required Furnace Bonnet Capacity (Mbh*)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)
30	32	33	35	38	40	43
35	37	39	41	44	47	50
40	42	44	47	50	53	57
45	47	50	53	56	60	64
50	53	56	59	63	67	72
55	58	61	65	69	73	79
60	63	67	71	75	80	86
65	68	72	77	81	86	93
70	74	78	83	88	93	100
75	79	83	89	94	100	107
80	84	89	94	100	106	114
85	89	94	100	106	113	122
90	95	100	106	113	120	129
95	100	105	112	119	126	136
100	105	111	118	125	133	143
105	110	117	124	131	140	150
110	116	122	130	138	146	157
115	121	128	136	144	153	164
120	126	133	142	150	160	172
125	131	139	148	156	166	179
130	137	144	153	163	173	186
135	142	150	159	169	180	193
140	147	155	165	175	186	200
145	152	161	171	181	193	207
150	158	167	177	188	200	215
155	163	172	183	194	206	222
160	168	178	189	200	213	229
165	173	183	195	206	219	236
170	179	189	201	213	226	243
175	184	194	207	219	233	250
180	189	200	212	225	239	257
185	194	205	218	231	246	265
190	200	211	224	238	253	272
195	205	216	230	244	259	279
200	210	222	236	250	266	286

*Thousands of Btu per hr.

The values in Col. 4 are those recommended by National Warm Air Heating and Air Conditioning Association (Manual 7, Fourth Edition) for uninsulated pipes in heated spaces and insulated pipes in unheated spaces. Col. 6, according to the same authority, gives the required furnace bonnet capacity for insulated ducts in attics.

Calculating Required Cfm

A variety of factors should be considered in calculating the air volume (cfm) required for heating:

Where the air is recirculated, as in residences and similar buildings of moderate size, it is commonly assumed that return air reaches the furnace at a temperature of about 65 or 70 F. For the older, conventional type systems, where the warm air registers are located along interior partitions, the return air temperature is usually assumed to be 65 F. For the more modern perimeter type of heating system, where the warm air diffusers are located along the outside walls of the rooms (either in the floor or in the wall underneath or very close to windows), experience shows that regardless of where the return air is taken its temperature will be about 70 F.

For conventional systems it is usually recommended that when the furnace is generating the quantity of heat needed to produce the bonnet capacity (as determined by the method already discussed), the volume of air circulated should be such that its temperature rise through the furnace will be about 100 F. This does not apply to any proprietary system, the manufacturer of which may recommend that the system be designed on the basis of a relatively high bonnet temperature. In the case of any such special system, the recommendations of the manufacturer should be followed.

With the rate of fuel input (heat generation) remaining the same, an *increase* in the volume of air circulated results in (a) smaller temperature rise through the furnace, and (b) lower bonnet temperature. Likewise, a *reduction* in air volume passed through the furnace results in (a) greater temperature rise through the furnace and (b) higher bonnet temperature.

It should be noted that in addition to changes in the temperature rise through the furnace and consequently the bonnet air temperature, changes in the volume of air circulated also affect the efficiency of the furnace. Any change in efficiency with a fixed rate of heat input likewise changes the bonnet capacity. However, in residences and similar buildings of moderate size using conventional automatically fired furnaces, an increase or decrease of as much as 15 per cent in the volume of air circulated is not likely to make a change of more than about ±5 per cent in the bonnet capacity. (This figure is based on data published in University of Illinois Engineering Experiment Station Bulletin No. 318 entitled Investigation of Oil-Fired Forced-Air Furnace Systems in the Research Residence).

In the case of public or industrial buildings where unusually large volumes of ventilation air might greatly increase the quantity of air flowing through the furnace, the result would be an increase in the capacity of the furnace for a given firing rate. Consequently no harm would be done. However, a reduction in furnace efficiency and capacity may result if any very substantial reduction is made in air volume — say 20 per cent or more. If a heating dealer who is experimenting with high temperature systems using a conventional type of furnace which has been rated on the basis of a bonnet temperature of about 165 or 170 F wants to operate with a bonnet temperature approaching 200 F, he should confer with the manufacturer of the furnace to find out just how much the efficiency and capacity might be reduced. Experience indicates that reducing the air volume so as to increase the bonnet temperature from about 165 up to 180 F, does not reduce the capacity of a conventional furnace more than about 5 per cent — which is well within the allowable limit, because even the most accurate heat loss calculations will have a plus or minus variation of 5 per cent.

How Much 70 F Air?

To find cfm of 70 F return air to be handled by the blower for heating, proceed as follows:

First, for convenience, express the furnace bonnet capacity required for heating (as determined by the method already discussed) in thousands

TABLE 2—CFM FACTOR, to be selected by desired temperature rise

Temperature Rise through Furnace	cfm Factor
60	15.4
65	14.2
70	13.2
75	12.3
80	11.6
85	10.9
90	10.3
95	9.7
100	9.3
105	8.8
110	8.4
115	8.1
120	7.7
125	7.4
130	7.1
135	6.9
140	6.6

TABLE 3—VENTILATION HEAT LOSS (Additional Heat in Mbh Required to Warm Ventilation Air Based on 70 F Room Air Temperature)

Cfm Outside Air	Outside Air Temperatures									
	65	60	55	50	45	40	35	30	25	20
10		0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5
20	0.1	0.2	0.3	0.4	0.5	0.6	0.8	0.9	1.0	1.1
30	0.2	0.3	0.5	0.6	0.8	1.0	1.1	1.3	1.5	1.6
40	0.2	0.4	0.6	0.9	1.1	1.3	1.5	1.7	1.9	2.2
50	0.3	0.5	0.8	1.1	1.4	1.6	1.9	2.2	2.4	2.7
60	0.3	0.6	1.0	1.3	1.6	1.9	2.3	2.6	2.9	3.2
70	0.4	0.8	1.1	1.5	1.9	2.3	2.6	3.0	3.4	3.8
80	0.4	0.9	1.3	1.7	2.2	2.6	3.0	3.5	3.9	4.3
90	0.5	1.0	1.5	1.9	2.4	2.9	3.4	3.9	4.4	4.9
100	0.5	1.1	1.6	2.2	2.7	3.2	3.8	4.3	4.9	5.4
200	1.1	2.2	3.2	4.3	5.4	6.5	7.6	8.6	9.7	10.8
300	1.6	3.2	4.9	6.5	8.1	9.7	11.3	13.0	14.6	16.2
400	2.2	4.3	6.5	8.6	10.8	13.0	15.1	17.3	19.4	21.6
500	2.7	5.4	8.1	10.8	13.5	16.2	18.9	21.6	24.3	27.0
600	3.2	6.5	9.7	13.0	16.2	19.4	22.7	25.9	29.2	32.4
700	3.8	7.6	11.3	15.1	18.9	22.7	26.5	30.2	34.0	37.8
800	4.3	8.6	13.0	17.3	21.6	25.9	30.2	34.6	38.9	43.2
900	4.9	9.7	14.6	19.4	24.3	29.2	34.0	38.9	43.7	48.6
1000	5.4	10.8	16.2	21.6	27.0	32.4	37.8	43.2	48.6	54.0
2000	10.8	21.6	32.4	43.2	54.0	64.8	75.6	86.4	97.2	108.0
3000	16.2	32.4	48.6	64.8	81.0	97.2	113.4	129.6	145.8	162.0
4000	21.6	43.2	64.8	86.4	108.0	129.6	151.2	172.8	194.4	216.0
5000	27.0	54.0	81.0	108.0	135.0	162.0	189.0	216.0	243.0	270.0
6000	32.4	64.8	97.2	129.6	162.0	194.4	226.8	259.2	291.6	324.0
7000	37.8	75.6	113.4	151.2	189.0	226.8	264.6	302.4	340.2	378.0
8000	43.2	86.4	129.6	172.8	216.0	259.2	302.4	345.6	388.8	432.0
9000	48.6	97.2	145.8	194.4	243.0	291.6	340.2	388.8	437.4	486.0

Cfm Outside Air	Outside Air Temperature									
	15	10	5	0	−5	−10	−15	−20	−25	−30
10	0.6	0.6	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1
20	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.1	2.2
30	1.8	1.9	2.1	2.3	2.4	2.6	2.8	2.9	3.1	3.2
40	2.4	2.6	2.8	3.0	3.2	3.5	3.7	3.9	4.1	4.3
50	3.0	3.2	3.5	3.8	4.1	4.3	4.6	4.9	5.1	5.4
60	3.6	3.9	4.2	4.5	4.9	5.2	5.5	5.8	6.2	6.5
70	4.2	4.5	4.9	5.3	5.7	6.0	6.4	6.8	7.2	7.6
80	4.8	5.2	5.6	6.0	6.5	6.9	7.3	7.8	8.2	8.6
90	5.3	5.8	6.3	6.8	7.3	7.8	8.3	8.8	9.2	9.7
100	5.9	6.5	7.0	7.6	8.1	8.6	9.2	9.7	10.3	10.8
200	11.8	13.0	14.0	15.1	16.2	17.3	18.4	19.4	20.5	21.6
300	17.8	19.4	21.1	22.7	24.3	25.9	27.5	29.2	30.8	32.4
400	23.8	25.9	28.1	30.2	32.4	34.6	36.7	38.9	41.0	43.2
500	29.7	32.4	35.1	37.8	40.5	43.2	45.9	48.6	51.3	54.0
600	35.6	38.9	42.1	45.4	48.6	51.8	55.1	58.3	61.6	64.8
700	41.6	45.4	49.1	52.9	56.7	60.5	64.3	68.0	71.8	75.6
800	47.5	51.8	56.2	60.5	64.8	69.1	73.4	77.8	82.1	86.4
900	53.5	58.3	63.2	68.0	72.9	77.8	82.6	87.5	92.3	97.2
1000	59.4	64.8	70.2	75.6	81.0	86.4	91.8	97.2	102.6	108.0
2000	118.8	129.6	140.4	151.2	162.0	172.8	183.6	194.4	205.2	216.0
3000	178.2	194.4	210.6	226.8	243.0	259.2	275.4	291.6	307.8	324.0
4000	237.6	259.2	280.8	302.4	324.0	345.6	367.2	388.8	410.4	432.0
5000	297.0	324.0	351.0	378.0	405.0	432.0	459.0	486.0	513.0	540.0
6000	356.4	388.8	421.2	453.6	486.0	518.4	550.8	583.2	615.6	648.0
7000	415.8	453.6	491.4	529.2	567.0	604.8	642.6	680.4	718.2	756.0
8000	475.2	518.4	561.6	604.8	648.0	691.2	734.4	777.6	820.8	864.0
9000	534.6	583.2	631.8	680.4	729.0	777.6	826.2	874.8	923.4	972.0

of Btu per hour (Mbh) by dividing the capacity in Btu per hr by 1000.

Second, multiply this bonnet capacity in Mbh by the cfm factor from Table 2 corresponding to the desired temperature rise of air passing through the furnace. For a conventional system designed according to National Warm Air Association Manual 4, 7 or 7-A, it is suggested that cfm be based on a temperature rise through the furnace of about 100 F. For a small round duct system designed according to Manual 10, a temperature rise of 110 F is acceptable to many heating men.

Designing for a temperature rise through the furnace of 80 F or less may, in some cases, result in circulating a volume of air in a residence which is great enough to create an uncomfortable feeling of air motion in the rooms. (In a church auditorium, store building or similar room with a ceiling height of 12 ft or more, this would not necessarily apply.)

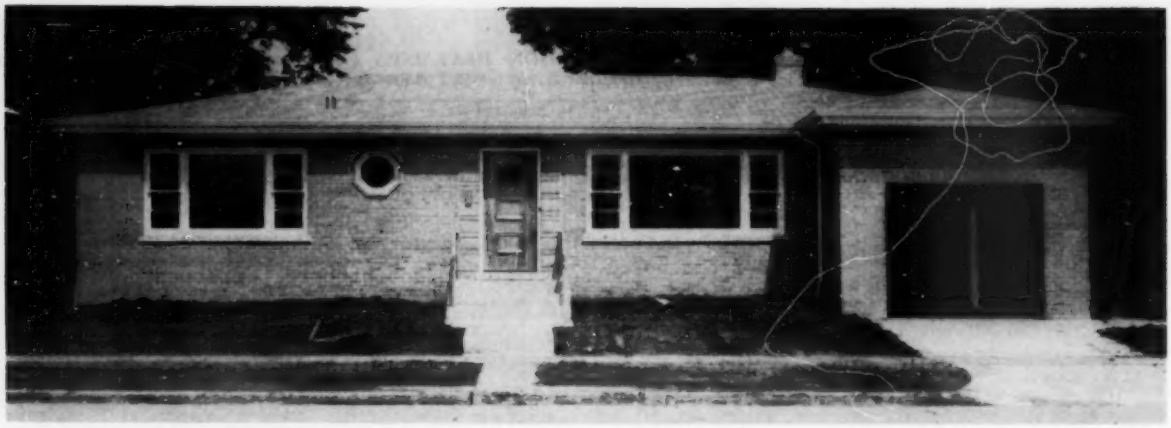
A temperature rise through the furnace ranging from 85 F to 115 F is considered acceptable by most heating contractors who have experimented with variations in air volume.

For a conventional system designed according to NWAHACA Manual 7 (or any of the work sheets accompanying Manual 4), a temperature rise of 100 F through the furnace is usually most satisfactory. However, in a structure having a large cubic volume and a relatively small heat loss, a temperature rise of 90 or 95 F has sometimes been found better.

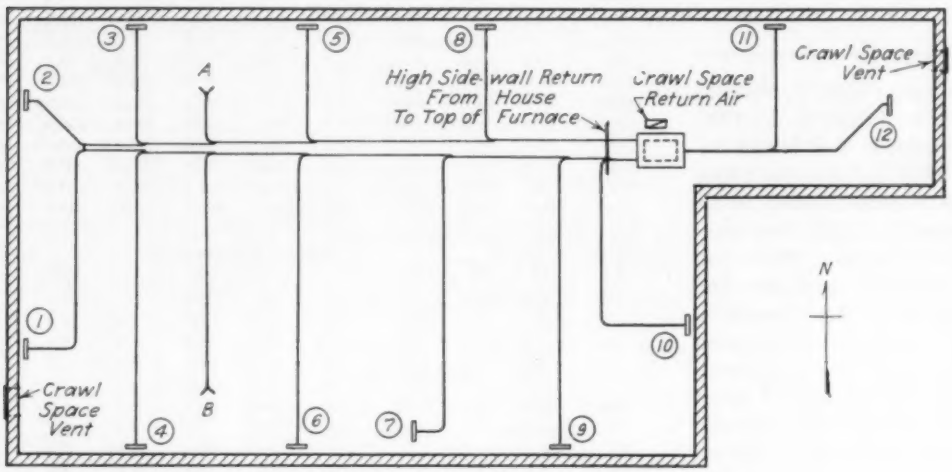
For small pipe systems which recirculate all of the air, smaller air volumes with consequent temperature rises ranging from 110 F up to as much as 125 or even 130 F have been reported satisfactory by a number of experienced heating men. The capacity tables in NWAHACA Manual 10 are recommended, however, as being desirably conservative for 4 in. pipe systems using conventional furnaces.

With a recirculating system where the return air temperature is about 70 F, a temperature rise through the

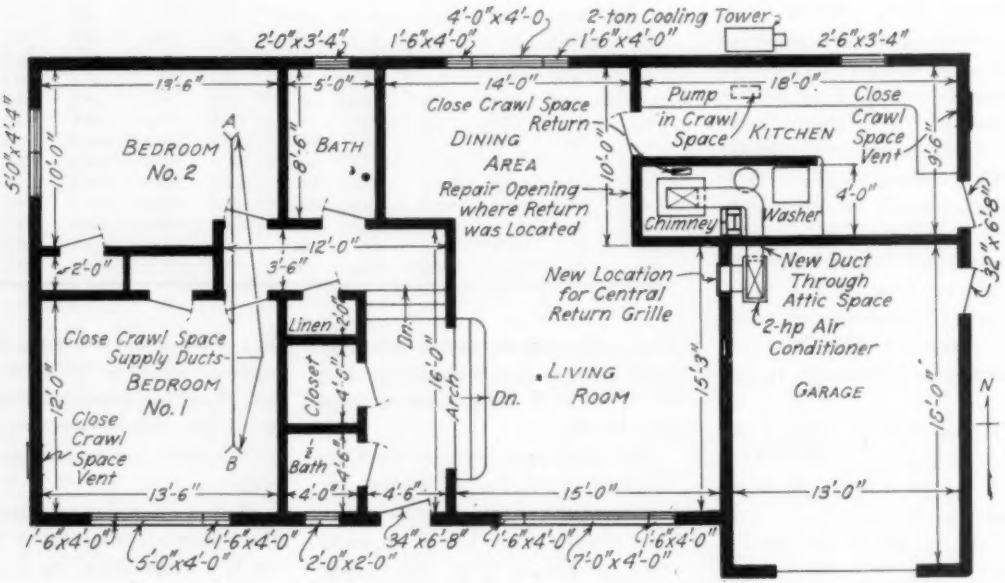
(*Please turn to page* 146)



1 TO PROVIDE year 'round comfort for this one story home built on a crawl space . . .



2 THE EXISTING warm air perimeter heating system . . .



3 WAS MODIFIED to accommodate the 2 hp cooling unit selected

How to Add Cooling to Home Built on Crawl Space

By S. W. Reid
Air Conditioning Engineer
Gilbert Associates, Inc.

YEAR 'ROUND residential air conditioning offers an unlimited variety of interesting problems to the dealer because of the different types of home construction being used today. In this series of articles, it is planned to discuss only two of the many types of problems that may be encountered. The previous two articles dealt with the design of a complete conditioning system for a two story urban home with a full basement. This month we shall focus attention on the home shown in Fig. 1.

The house is located in southeastern Pennsylvania in a growing suburban community. It is of single floor construction, built upon a crawl space. The walls are solid masonry, furred and plastered on the inside. The front of the house, which faces south, contains two large picture windows, one in the front bedroom and one in the living room. These may be seen in Fig. 1, and are also indicated on the plan, Fig. 2. Ceiling height is 8 ft except in the entrance hall, where the floor is raised about 1 ft. The crawl space extends under all parts of the house except the garage floor, which was laid on grade.

As constructed and sold to the original owner, the house contained a warm air perimeter type heating system operated by a gas fired, counter-flow type furnace located in the equipment room. The duct system is of the main and branch type installed in the crawl space. Air is supplied to perimeter type floor diffusers as indicated on the plan, Fig. 2. Air is returned to the system through a single grille located high in the equipment room wall adjacent to the dining area.

The builder subcontracted the heating system to a local dealer who designed it in accordance with the recommendations of Manual 4, Warm Air Perimeter Heating as Applied to Structures Without Basements, published by the National Warm Air Heating and Air Conditioning Association.

After he had spent the first summer in the home, the owner decided to add cooling. The story to be told by this article, therefore, concerns how a cooling unit may be added to the existing warm air system shown on Fig. 2.

Finding the Cooling Load

In order to approach the problem systematically, we shall follow the ten steps suggested in a previous article (American Artisan, November 1953) to arrive at the cooling load. Standard forms, such as are proposed in NWAHACA Manual 11, may be used if desired. The steps are as follows:

1) Outside design temperatures based on geographical location of home are 95 F dry bulb, 75 F wet bulb.

2) Inside design temperatures are chosen as 80 F dry bulb, 67 F wet bulb.

3) Time of day at which maximum load will occur is chosen as 2 p.m. This is an estimate based on the fact that the largest sunlit wall not only faces south but also has two large picture windows.

4) All rooms of the house are to be cooled except the garage. The crawl space is heated but will not be cooled.

5) Net areas of walls, windows, ceilings, and floors were calculated and tabulated. Table 1, for the kitchen, shows how the information is set up. Areas are shown in column A.

6) Overall heat transfer coefficients, illustrated by Table 1, column B, were calculated or chosen directly from tables of pre-calculated values in the ASHVE Heating, Ventilating, Air Conditioning Guide, based on the following considerations:

a) Outside walls consisting of 4 in. face brick, 4 in. cinder block, furring strips, ½ in. plaster board, and ½ in. plaster.

Air Conditioning Fundamentals

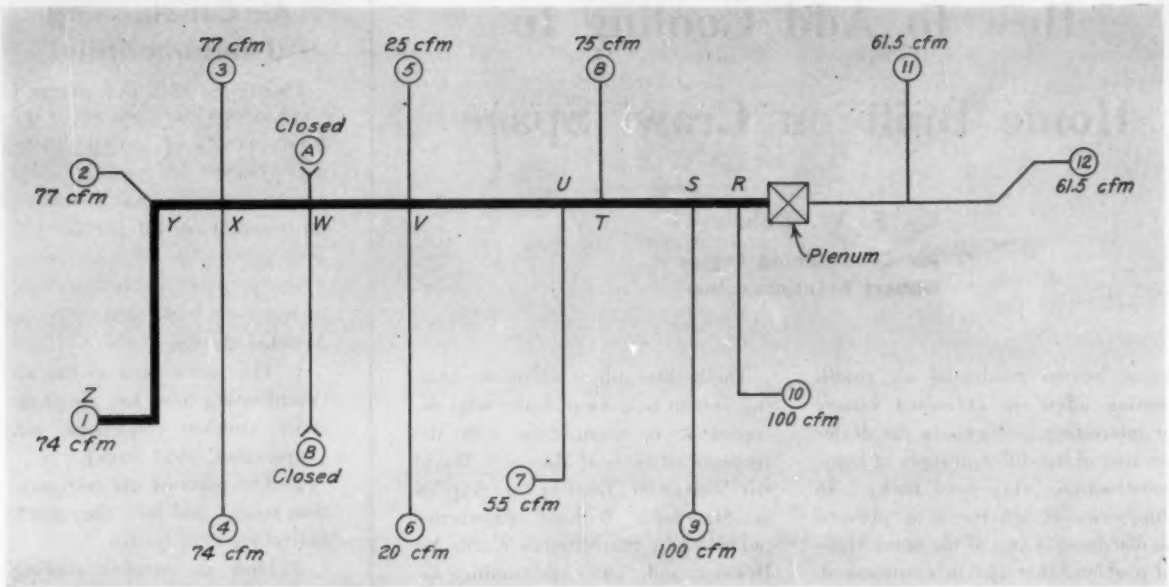
This is the 16th in a planned series of articles devoted to the fundamentals of air conditioning systems for summer and winter, and providing specific information on all the component parts. Special emphasis is placed on how to adapt cooling to warm air heating systems.

Articles So Far:

1. The terms used in the air conditioning field, i.e., air properties, comfort conditions, etc. (September, 1952 issue).
2. The parts of the refrigeration system and how they work (October, 1952 issue).
3. How to estimate cooling loads (November, 1952 issue).
4. How to achieve proper air stream patterns in the conditioned space (December, 1952 issue).
5. Duct design — comparison between sizing for summer and winter (January, 1953 issue).
6. Condensing units (February issue).
7. Fans, fan motors and fan speeds (March issue).
8. Filters—throwaway, cleanable, electronic (April issue).
9. Condensers and water regulating valves (May issue).
10. Cooling towers and evaporative condensers (June issue).
11. Equipment selection (July issue).
12. Electrical control systems (August issue).
13. Electric controls (September issue).
14. Sample problem — estimating cooling load and selecting equipment (November and December issues).
15. Second sample problem, using different building and conditions (this issue).

Future Articles:

1. Trouble shooting — detecting malfunctioning of summer air conditioning equipment (two articles).
2. Replacement procedures (two articles).



Duct Section	Cooling (Cfm)	Size (In.)	Resistance per 100 ft	Velocity (fpm)	Length (ft)	Equiv. Feet of Fittings	Equivalent Length (ft)	Actual Resistance (in. Water)
Plenum-R	677	14x8	0.13	950	1.5	10*	11.5	0.015
R-S	677	13x8	0.12	875	2.5	—	2.5	0.003
S-T	477	12x8	0.09	780	5.0	—	5.0	0.005
T-U	402	11x8	0.09	725	2.0	—	2.0	0.002
U-V	347	10x8	0.08	675	8.5	—	8.5	0.007
V-W	302	8x8	0.11	780	5.0	—	5.0	0.006
W-X	302	6x8	0.23	1000	5.0	—	5.0	0.012
X-Y	151	4x8	0.18	760	4.0	—	4.0	0.007
Y-Z	74	5" dia.	0.13	580	15.0	90**	105.0	0.137
Resistance Pressure of Duct and Fittings								0.194
Resistance Pressure of Return System								0.050
Resistance Pressure of Cooling Unit								0.300
Total Blower External Resistance Pressure								0.544

*Bonnet take-off.
**Trunk take-off, 25 ft; 90-deg elbow, 10 ft; boot and floor register, 55 ft.

4 TO CHECK THE ADEQUACY of the heating ducts for handling the required cooling capacity, a sketch is first made of the duct system *(above)* after which a table is drawn up to analyze resistance in the longest run

U value, 0.27 Btu per hr per sq ft per deg F.

b) Ceiling-roof combination consisting of asphalt shingles, roofing paper, 1 in. wood roof sheathing on roof joists, attic space, 3 in. loose rockwool between ceiling joists, ½ in. plaster board, ½ in. plaster. *U* value, 0.08 Btu per hr per sq ft per deg F.

c) Floor consisting of oak on yellow pine. *U* value, 0.34 Btu per hr per sq ft per deg F.

d) Windows consisting of single common glass everywhere, except center portions of picture windows in front bedroom, dining area, and living room, which are double glazed. *U* values of single glass windows, 1.1 Btu per hr per sq ft per deg F; double glass windows, 0.45 Btu per hr per sq ft per deg F.

e) Inside garage walls consisting of 8 in. cinder block furred and plastered on the house side. *U* value, 0.27 Btu per hr per sq ft per deg F.

f) Doors, *U* value, 0.85 Btu per hr per sq ft per deg F.

7) Temperature differentials used are illustrated by column C of Table 1. These will vary somewhat depending upon their source (such as the ASHVE Guide). As explained in the earlier article referred to previously, temperature values for sun lit surfaces take into account the effect of solar radiation on the cooling load.

8) Column D illustrates the heat gain from each exposed surface. These values were obtained by multiplying values in columns A, B, and C together.

9) Table 2 shows a summary of the heat gain totals for each room. These values were obtained from a calculation for each room similar to the one illustrated by Table 1 for the kitchen.

10) Table 2 also takes into account outside air brought in at the rate of one air change per hr. This is added to the room sensible loads and other miscellaneous loads and gives the total sensible load. Latent loads due to people and outside air may also be added in to get the total overall cooling load.

Sensible Load the Main Factor

Following the recommendations made concerning the selection of equipment for the previous sample house (American Artisan, November 1953), the cooling unit for this house will be chosen by considering mainly the sensible load and the sensible capacity of the cooling unit. The reason for this is indicated by a close examination of the figures in Table 2. The sensible load is listed as 23, 631 Btu per hr and the latent load as 2720 Btu per hr, making a total of 26,351 Btu per hr. By comparison to the sensible load, the latent load is very small.

By actual experience, however, we know that there are moisture sources other than those listed in a residence that are not readily evaluated (cooking, bathing, laundering, window or

door opening, etc.) These tend to increase the latent and total loads beyond estimated values, thereby making these loads as calculated of minor importance in selecting equipment. In recognition of this, some load calculation methods for residences estimate the latent load by taking an arbitrary 30 per cent of the calculated sensible load. This figure is then added to the sensible load to get a safe "total" load for machine selection purposes. It makes little difference which method is used, so long as the facts are recognized and considered when selections are made.

Let us now examine the sensible load requirement of 23,631 Btu per hr and see how it fits in with unit capacities, typical of which are the following:

Unit	Capacities with 80 F DB/67 F WB entering air, Btu per hr		
Hp	*Sensible*	*Latent*	*Total*
2	16,600	7,530	24,130
3	25,000	11,200	36,200

If the 2 hp unit were chosen, its sensible capacity would appear to be short by 7031 Btu per hr (23,631 — 16,600). If the 3 hp unit were chosen, at the entering air condition shown it would appear to be 1369 Btu per hr in excess of requirements. Let us look further and examine the capacities of the same two units at a lower entering wet bulb condition, say 64 F.

Unit	Capacities with 80 F DB/64 F WB entering air, Btu per hr		
Hp	*Sensible*	*Latent*	*Total*
2	18,460	4,040	22,500
3	27,700	6,050	33,750

2 Hp Unit Selected

The picture has now changed somewhat in that the 2 hp unit is 5171 Btu per hr short in sensible capacity, while the 3 hp unit is 4069 Btu per hr above the calculated load. The latter operating condition may be closer to what will actually occur, since the machine will tend to lower the wet bulb temperature until the latent load and latent capacity are in balance. At the latter operating condition of entering air at 80 F dry bulb, 64 F wet bulb, the sensible load is substantially half way between the 2 and 3 hp sensible capacities. The latent capacity of even the 2 hp unit is well above the estimated latent load.

Several final points are considered. Residential experience has indicated that 1 hp is required for each 400 to 600 sq ft of floor area. This is a rough guide that applies to modern small homes and varies for different sections of the country. The sample home has just over 1000 sq ft, indicating that a 2 hp unit should be a reasonable selection. It is also known that oversizing in residential cooling is not desirable, since a large unit will have more "off" time during which there will be no control of humidity.

Finally, the all important matter of initial and operating costs enters the picture. The 2 hp unit with its cooling tower represents a lower investment than the larger unit and would be expected to cost less to operate. It should be remembered that if the 2 hp unit is short of meeting sensible capacity, the deficiency will occur only during the relatively few days of peak outside conditions. Because the unit will be operating continuously, keeping humidity depressed, any upward dry bulb slip may not be noticed too much except on the thermometer.

In choosing the 2 hp unit for this sample problem, the author does not mean to imply that it is always safe or desirable practice to undersize in residential work. A great deal depends upon the results desired or upon the wishes of the home owner. Each dealer or designer must draw on his own experience to determine probable results of such a practice. At the present time, certain studies show that past methods of load calculation indicate loads that are higher that those determined by actual test. The industry is gradually accumulating information which will result in more accurate means for determining residential loads. Present commercial practice applied to residences, in the meantime, results usually in "safe" load estimates.

Installing the Unit

Having established the 2 hp unit as the one needed for the sample house, the next step we must take is to look for possible unit locations. The utility room offers no unused space, as

(*Please turn to page* 145)

Table 1—Sample of Calculation Used for each Room

Room	Exposed Surface	A Net Area	B *U*	C Temp. Diff.	D Btuh	Remarks
Kitchen	N. Wall	136	0.27	15	550	
and Utility	N. Glass	8	1.10	15	132	venetian blind
	E. Wall	58	0.27	15	235	
	Door	18	0.85	15	230	single wood
	S. Wall	104	0.27	15	422	garage assumed open
	Ceil.-roof	171	0.08	55	753	
	Floor	171	0.34	15	872	crawl space is vented in summer

Table 2—Cooling Load and Air Quantity Summary

Room or Area	Total Btuh	Latent Btuh	Sensible Btuh	Sensible Btuh %	Air Cfm	Remarks
Bedroom No. 1 & Closet	3599	—	3599	17.4	139	
Bedroom No. 2 & Closet	3755	—	3755	18.1	145	
Bath	658	—	658	3.2	25	
Center Hall & Linen Closet	475	—	475	2.3	*18	
Front Hall & Closet	1400	—	1400	6.8	55	
Half Bath	520	—	520	2.5	20	
Living Room	5871	750	5121	25.0	200	three people
Dining Area	1919	—	1919	9.3	75	
Kitchen-Utility	3194	—	3194	15.4	123	
Room or Area Total			20641	100.0	800	
Blower Motor	750	—	750			¼ hp
Outside Air	4210	1970	2240			1 chg/hr
	26351	2720	23631			

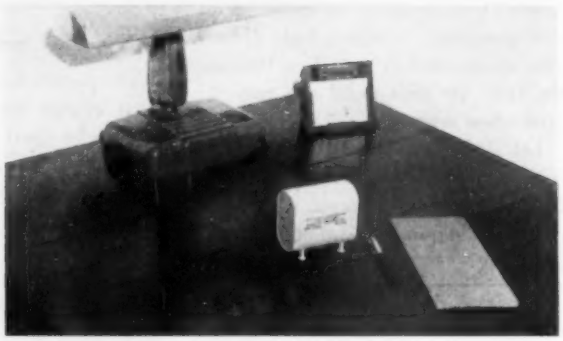
*No register in center hall. This air divided equally among four bedroom registers.



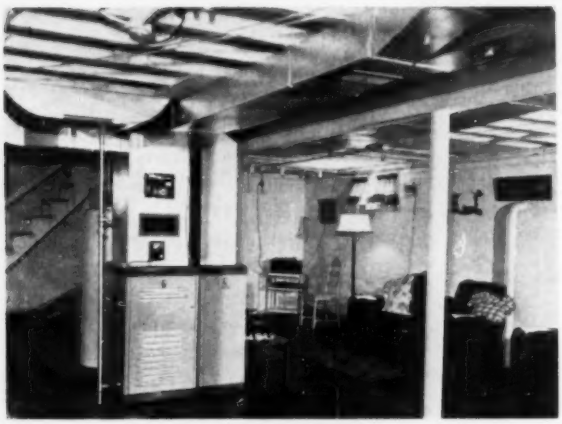


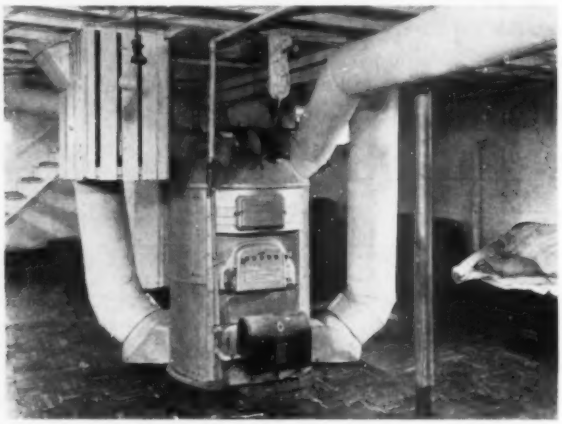
WITH A store front kept attractive both day and night . . .





WITH CUSTOMER SERVICES such as furnace cleaning (truck, *left)*, which often lead to remodeling jobs, and gift reminders to customers *(right)*, such as this miniature fuel oil tank and leather folder . . .





WITH SALES TOOLS such as these "before" and "after" photos of installations . . .

with many approaches —

Dealer Closes Many Sales

ARE LARGE show rooms a valuable selling tool? Many warm air heating and air conditioning dealers often differ on this point. Some feel that the floor area can be better allocated to other uses and rely upon window display for an attractive store front. However, many successful dealers give much of the credit for their continual increase in business volume to the combined use of attractive show windows and a spacious, well lighted display room.

One of the supporters of this combination merchandis-

ing method is Elton Gogolin, of Toledo, who says that his display room has "sold" at least 50 warm air heating systems to people who have been attracted by his displays and who would not have been reached through any other advertising method he uses. Mr. Gogolin also feels that the show room has proven an effective selling aid for his salesmen who bring customers to the building so that they may better select the type of heating equipment they want.

The equipment in the show windows is rearranged periodically, but furnaces make up the primary theme of the display. All models are shown — highboy, lowboy, horizontal and wall gas, oil and coal fired. This wide choice helps a customer in selecting the exact type of heating equipment he desires and this, in turn, helps build confidence in the heating system when it is installed.

Demonstration Units in Show Room

The display room contains such equipment as residential cooling packages, hot water heaters, incinerators, humidifiers and conversion burners, in addition to furnaces. Several models of each type are shown.

Also in the show room are two oil burner demonstration units, each one consisting of a complete oil burner, a combustion chamber and a mirror suspended above and diagonally across the combustion chamber. Looking in the mirror, a prospective customer can see how completely the combustion chamber is filled with flame as the oil burner is operated. The salesman can point out to the prospect the lack of soot on the mirror and the walls of the combustion chamber.

Mr. Gogolin says these demonstration units have convinced many doubtful prospects that fuel oil can be burned cleanly and safely. They have helped sell many automatically fired replacement furnaces where the customer originally had intended to have repairs made on his gravity hand fired coal furnace.

For those that favor the gravity coal fired heating system, the Gogolin company offers a complete line of replacement furnaces for this type of heating. In the first eight months of 1953 they had sold 65 replacement furnaces of this type.

Customer Reminders Build Business

In 1948, Elton Gogolin came to Toledo to start his own heating business. His background in warm air heating dated back to instructions received from his father, who had been sales manager for one of the country's largest furnace manufacturers. As soon as he became old enough, he began pushing door bells and selling modernization of existing heating systems. As his current business indicates, Mr. Gogolin feels that this side of the warm air heating industry offers the best rewards to the dealer who can build a reputation backed by satisfied customers.

He believes in keeping his customers reminded of the services which the company can perform for them. Several presents are given to each customer. One of these is



AS AN INCENTIVE to the salesmen, a bulletin board placed in their room records the day by day sales record for each man. The total for the year is recorded in a separate column

a leather bound envelope for valuable papers, on which is printed the company's name, address and phone number. Mr. Gogolin says, "Every month, as the customer places his receipts in this envelope, he sees our name and thinks of us."

Another gift given to customers' children brought to the show room is a coin bank in the shape of a 275 gal fuel oil tank. The company slogan, "Go to Gogolin for heating satisfaction," is printed above the company's name, address and telephone number. "This novelty has a way of reaching outside the immediate family of the customer," Mr. Gogolin says, "because you know how children show their possessions to family visitors."

Service Means Sales

Quick response to calls for service has helped build confidence in the company, in the recommendations its salesmen make and in the products sold. "Many customers who originally came to us for servicing now come to us for all of their heating needs," Mr. Gogolin says. "Filters, belts, thermostats, humidifier floats and accessories of all kinds are sold daily."

A letter received recently by the company is typical:

Toledo, Ohio

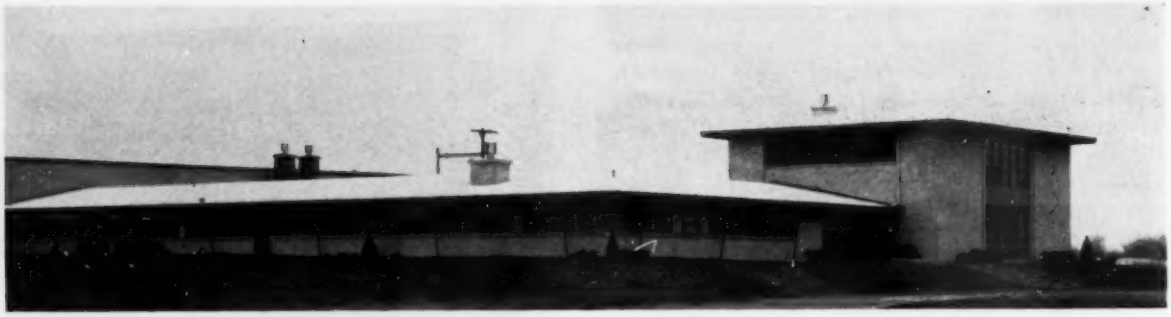
Gogolin Heating Co.
Dear Mr. Gogolin:
I am sending you a money order for the damper control and the new humidifier recently installed. We are talking of getting a new water heater and hope you will show us the best kind for our needs.

(Signed) Mrs. Oliver Pearsall

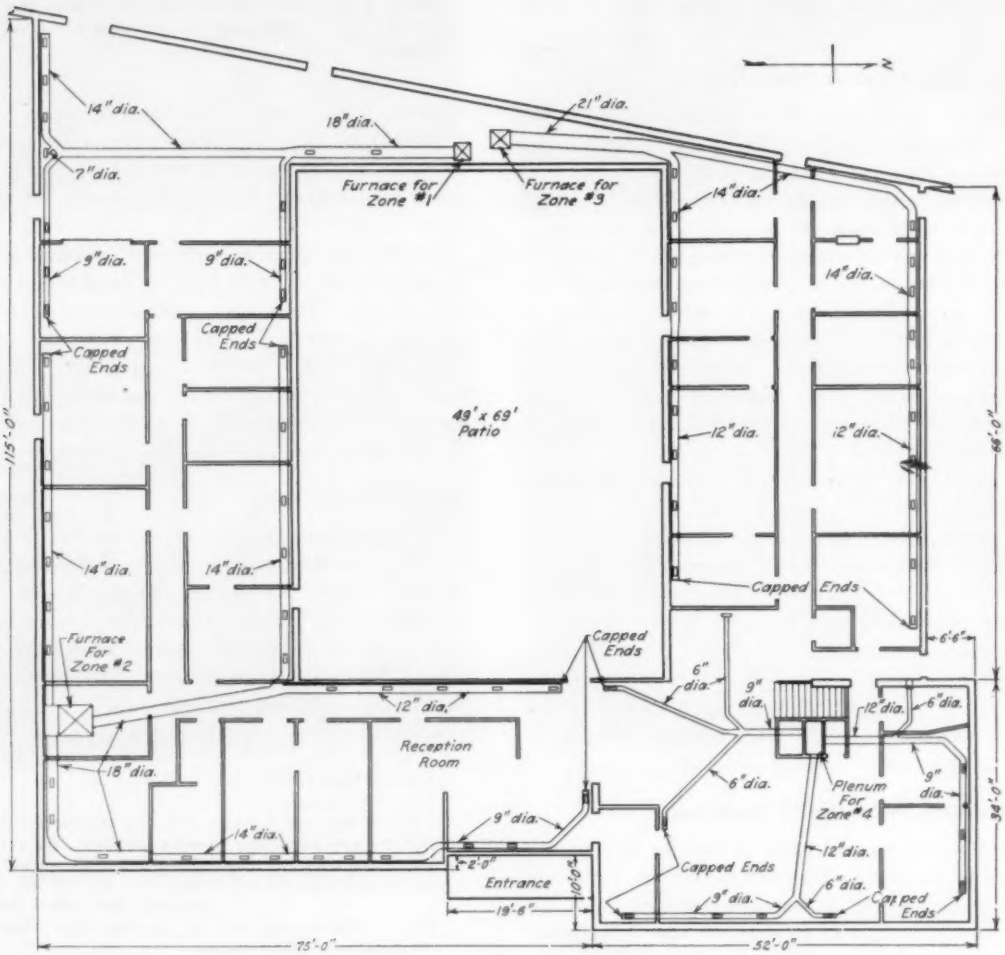
P.S. — Thanks also for the cleaning job. They (the cleaning crew) did a fine job.

The cleaning job mentioned in Mrs. Pearsall's letter refers to another service offered by the company. The cleaning truck is operated on a schedule of five jobs a day Monday through Friday and three jobs on Saturday. The leads for the cleaning jobs are obtained from telephone calls made by three operators who follow a list containing the names of people owning furnaces. When a prospect indicates an interest in having the heating

(*Please turn to page* 214)

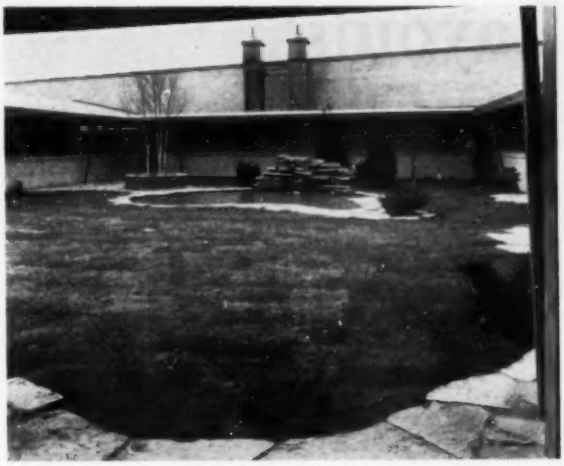


1 for Office Building with Large Glass Area



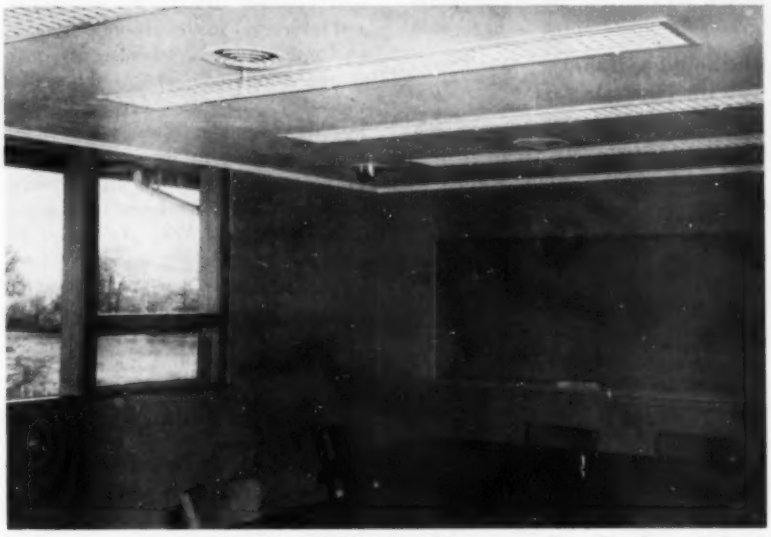
2 Four Zone Perimeter Heating

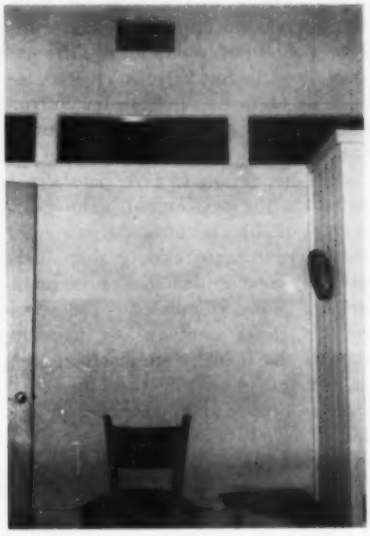
. . . maintains comfortable temperatures throughout despite wide variation in heat loss





3 THE PATIO *(left)*, enclosed between the wings of the building, is flanked by offices and corridors *(right)* which use glass as extensively as the rooms facing the outer walls





4 CEILING DIFFUSERS *(left)* are used to distribute air in the conference room on the second floor; return air grilles on the first floor *(right)* are high on the inside wall of each room

A POPULAR TREND in contemporary architecture for one and two story buildings is to specify as many square feet of glass area in the walls as other elements will permit. This was done when plans were drawn for the Air Control Products Co.'s new office building at Coopersville, Mich., which contains large and small offices, meeting rooms, an experimental laboratory and an employee dining room and kitchen.

The heating system selected for such a building should meet a number of special requirements. It should maintain comfortable temperatures in all portions of the building despite the fact that (due to the glass areas) the heat loss will vary considerably from section to section. Also, requirements may vary with the purposes for which the different sections are used (the dining room may require less heat during "off hours," etc.). To meet the particular needs of this office building, a perimeter floor system of air distribution was used in conjunction with four individually controlled furnaces, providing zone control.

As can be seen in Fig. 1, one corner of the office building is two stories high. Fig. 2 is the floor plan of the first floor. An unusual feature of the layout is the 49 $\times$ 69 ft open patio style court (Fig. 3, left) between the wings of the building.

Offices are arranged around both the outside walls and patio walls, with a full length hallway between each row of offices in the north and south wings. The east wing has offices along the outside wall only, with a connecting hall from the north wing to the south wing (Fig. 3, right). Glass is used extensively in the offices

(Please turn to page 152)

Economical Duct Layouts

By Peter Franck
Chief Field Engineer
Armo Cooling & Ventilating Co.

Here's a method the author uses to select the most suitable duct arrangement of several possible choices

WE MAY PARAPHRASE the saying that "all roads lead to Rome" as "many duct layouts get the air to the outlets." For a given room, or even for a given location of outlets, different engineers will have different duct layouts for various reasons — such as even distribution, lower friction loss, ease of installation, lower installation cost, etc.

It is impossible to give generalized rules for the best layout. However, it is possible to analyze a simple duct layout more closely than it is usually done under the pressure of getting plans completed. But even in this closer analysis, we have to narrow the field by emphasizing one aspect and neglecting the others.

It is proposed to consider in detail here only three very simple layouts, and the only consideration will be the weight of sheet metal duct work, since this weight is roughly proportional to the cost of installation. The purpose of this investigation is twofold: (1) on many large installations a small saving per unit (e.g., per room in a hotel) becomes an important factor if it is repeated sufficiently often; and (2) some general rules may be deduced from these particular cases.

As a measure of the weight of the duct work, we will only compute the weight of the straight runs, it being assumed that individual take-offs for each outlet would be provided in any layout so that there is no appreciable saving effected there in one layout over the other. Nor do we compare the different layouts as far as friction loss (i.e., operating economy) is concerned because the difference of the layouts in this respect is negligible.

Rectangular Room With Four Outlets

Example A is based on a rectangular room with four outlets where the air conditioning unit (or the main duct trunk line) is located off one corner of the room. Fig. 1 shows the three duct layouts considered, and the dimensions a, b and c which characterize the set-up. We assume that each outlet is to handle 1000 cfm, and the ducts are designed on an equal friction basis of 0.1 in. per 100 ft. Table 1 then shows the required duct sizes on the basis of square ducts (which are most economical), an aspect ratio of 3:1 (which is chosen to allow for exigencies of the job conditions), or a maximum depth of 12 in. (which is the most common type of limitation).

In order to plot the weights for all different values of a, b and c on simple graphs, we divide the room dimensions and the resulting weight by a and then compare the values of W/a (weight W divided by length a) for different values of the ratios $r_1 = c/a$ and $r_2 = b/a$. The resulting graphs for the three different aspect ratios are shown in Figs. 2, 3 and 4.

For any given value of a, b and c, these graphs would give immediately the total weight of the duct work. Since, however, we chose an entirely arbitrary example (as to air volume and friction drop), we are really not interested in the absolute weights under the different schemes, but only in the comparison of one scheme to the other. This comparison is given by the "boundary lines" which slant from lower left to upper right on the graphs and which immediately show the most economic scheme for a given ratio of c/a and b/a. As shown on the graphs, these boundary lines divide the range of the variables (i.e., the room dimension ratios) into distinct regions in which the relative weights corresponding to the different schemes do not change.

In Fig. 5, only the boundary lines of Figs. 2, 3 and 4 are shown. We note here the adverse effect on the weight of metal by flattening the ducts. This increased weight affects the larger ducts most due to the effect of the aspect ratio for a given "circular equivalent", and the heavier gages that must be used for the wider ducts. Consequently, schemes I and III suffer most when the ducts are flattened since they have the longer runs with the full air quantity. In view of this general condition, it is not necessary to consider the influence of the aspect ratio on the economies of the duct layouts, and we will, therefore, consider the following examples only for the most common circumstance — namely, the limitation of depth of duct.

Elongated Room With Three Pairs of Outlets

Example B (Fig. 6) covers possible arrangements in an elongated room in which three equidistant pairs

TABLE 1—DUCT SIZES for three different cases

Cfm	Equiv. dia.	Square duct	3:1 aspect ratio	12 in. maximum height of duct
4000	23.4	21.4 x 21.4	12.8 x 38.4	12 x 41.9
2000	18.0	16.5 x 16.5	9.9 x 29.7	12 x 23.2
1000	13.9	12.7 x 12.7	7.6 x 22.8	12 x 13.5

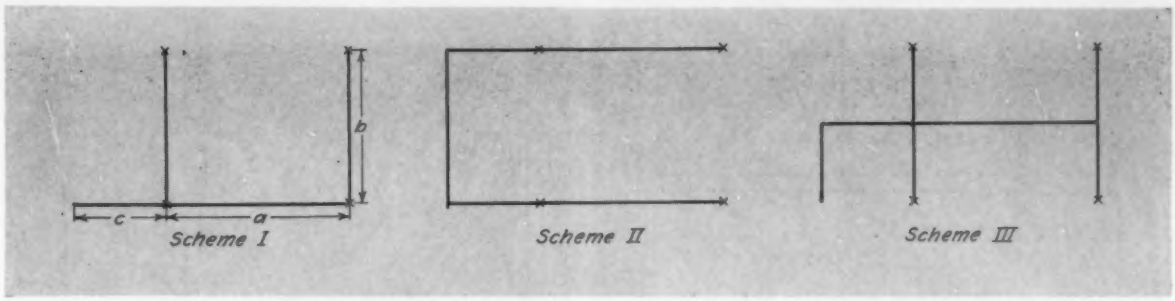


FIG. 1 — THE THREE DUCT LAYOUTS considered in Example A in the text. The points marked "x" show the four air outlet locations

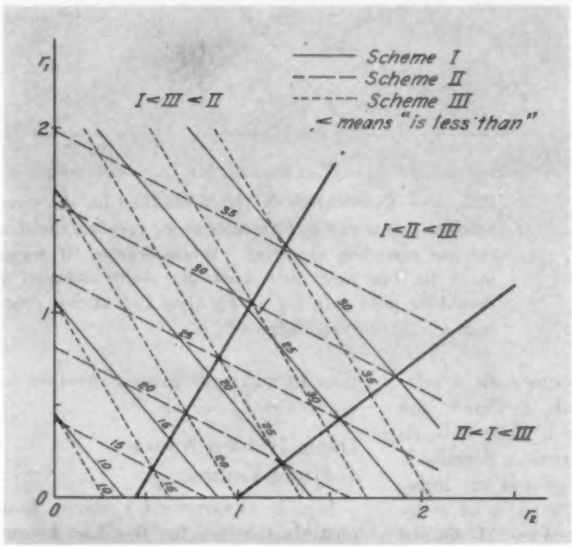


FIG. 2 — COMPARISON OF WEIGHT W divided by length a for different values of the ratios $r_1 = c/a$ and $r_2 = b/a$ for the three schemes shown in Fig. 1 (square ducts)

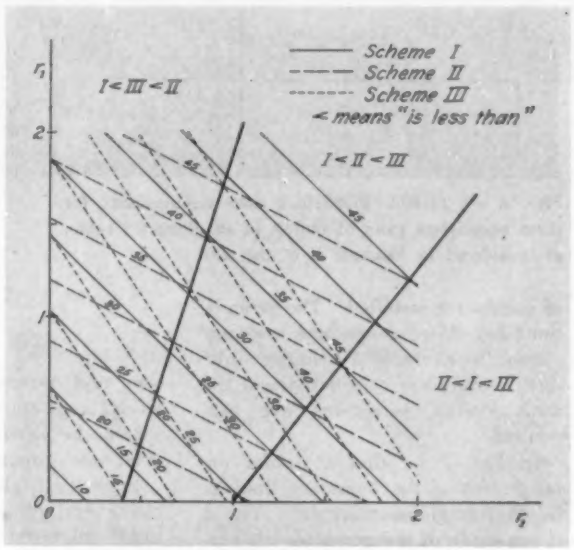


FIG. 3 — COMPARISON OF WEIGHT W divided by length a for different values of the ratios $r_1 = c/a$ and $r_2 = b/a$ for the three schemes shown in Fig. 1 (ducts with an aspect ratio of 3:1)

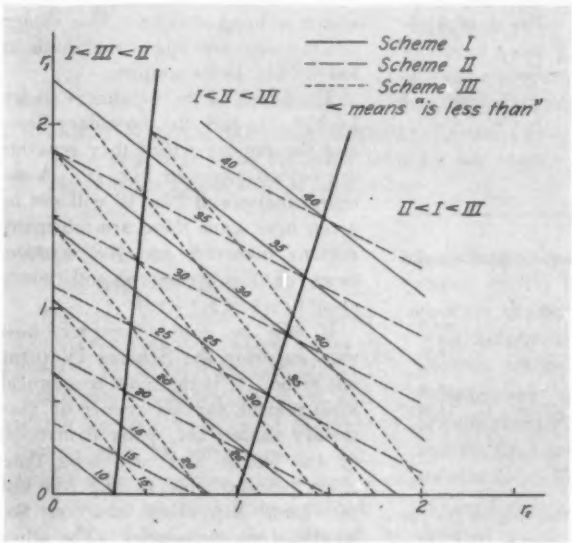


FIG. 4 — COMPARISON OF WEIGHT W divided by length a for different values of the ratios $r_1 = c/a$ and $r_2 = b/a$ for the three schemes shown in Fig. 1 (ducts with a maximum depth of 12 in.)

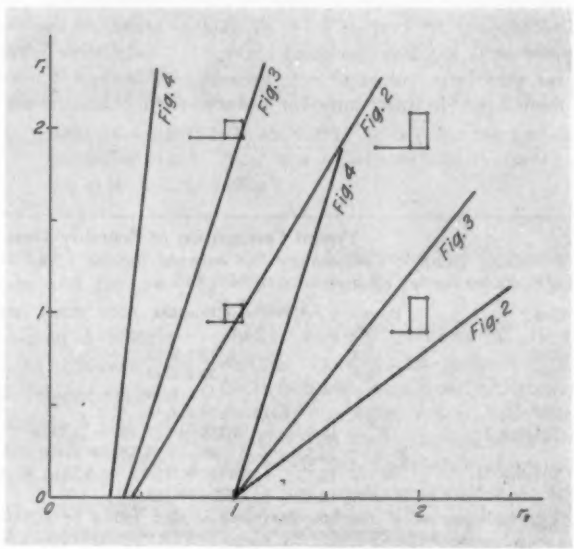


FIG. 5 — BOUNDARY LINES ONLY of Figs. 2, 3 and 4 are shown here. The adverse effect on the weight of the metal by flattening the ducts may be noted

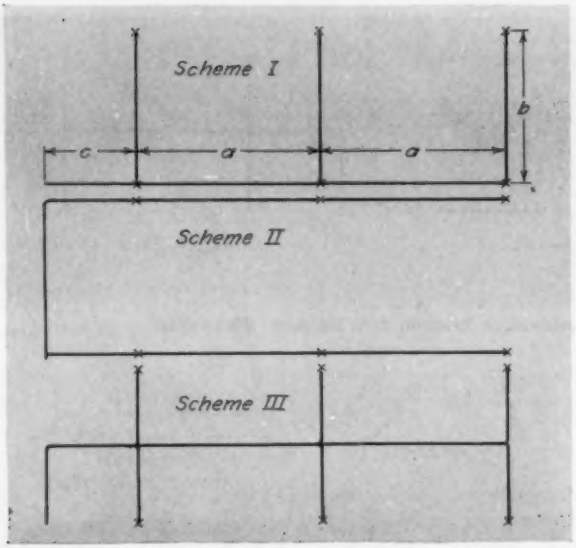


FIG. 6 — THREE POSSIBLE duct arrangements for three equidistant pairs of outlets in an elongated room, as considered in Example B of the text

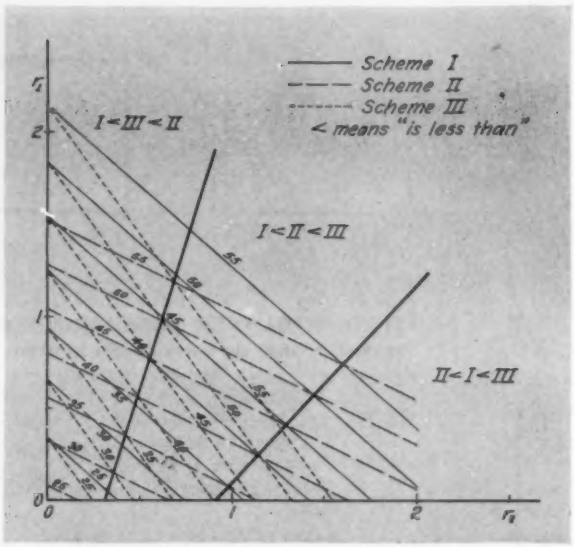


FIG. 7 — COMPARISON OF WEIGHTS for the three schemes shown in Fig. 6 (similar to the previous sketches for the preceding example). While Scheme III seems to be the one most often used, this sketch indicates it should be used only for a very long and narrow room with a relatively large approach, c

of outlets are installed. The assumptions for this arrangement are very similar to Example A; similar three duct layouts are considered and the same design conditions are prescribed.

In Fig. 7 we find a similar arrangement of the boundary lines as in the previous example. Yet a closer study of the graph reveals surprising results. By and large, Scheme III seems to be the most popular layout with engineers; but an inspection of the graph shows that for the most common spacing of the outlets ($r_2 = 1$; i.e., $b = a$) this scheme is the least economic except for very large values of c (c greater than $2a$). In fact, only for a very long and narrow room with a relatively large approach, c, should this scheme be considered, since it is always less economical than Scheme I.

Scheme II also affords an interesting example of the value of a detailed analysis: Scheme II should be considered whenever the approach is short or the room wide. The choice between Schemes I and II may often be delicate since a long approach may counteract the great width of the room. For a multiple installation involving many rooms of this type it would prove worthwhile to calculate the boundary line and then to make the proper decision in each case.

Ducts Hidden Above Hung Ceiling

Fig. 8 (Example C) shows four possible schemes for the duct layout in a large room. The first three correspond to the three layouts in the previous examples. The fourth is rather unorthodox but might be used where the duct work is hidden above a hung ceiling. The design assumptions are again the same as for the first two examples.

The graph of the weights is shown in Fig. 9, and the boundary lines and the regions which they separate are copied again in Fig. 10. A detailed analysis of Fig. 10 will not be given here since there are too many regions involved, and the arrangement of the figure is sufficiently clear to speak for itself.

It will be noted, however, how very superior the Scheme IV turns out to be. It is the most economical arrangement for all rooms of customary shape; i.e., wider than 6/10 of the length and not more than about twice as wide as long (the upper limit depending also on the length of the approach). The other schemes have approximately the same relative value as in the previous two examples.

Typical Computation of Boundary Lines

Using Example C, boundary line between Scheme I and II, first compute weights of ducts for the two schemes in terms of r_1 and r_2:

C'm	Equiv. round	Duct size	Gage	Weight per ft
1000	13.9	13.5 x 12	24	4.91
2000	18.0	23.2 x 12	24	6.77
3000	20.9	32.3 x 12	22	10.38
5000	25.3	50.3 x 12	22	14.58

Scheme I: $W = 14.58c + 12.28b + (5.19 + 3.39)a$

$W/a = 14.58r_1 + 12.28r_2 + 8.58$

Scheme II: $W = 13.54c + 4.91c + (5.19 + 3.39)b + 12.28a$

$W/a = 18.45r_1 + 8.58r_2 + 12.28$

The equation of the boundary line is then found by equating the weights for the two schemes:

$$14.58R_1 + 12.28R_2 + 8.58 = 18.45R_1 + 8.58R_2 + 12.28$$

or

$$3.87R_1 - 3.70R_2 + 3.70 = 0,$$

where R_1 and R_2 are the running coordinates of the boundary line.

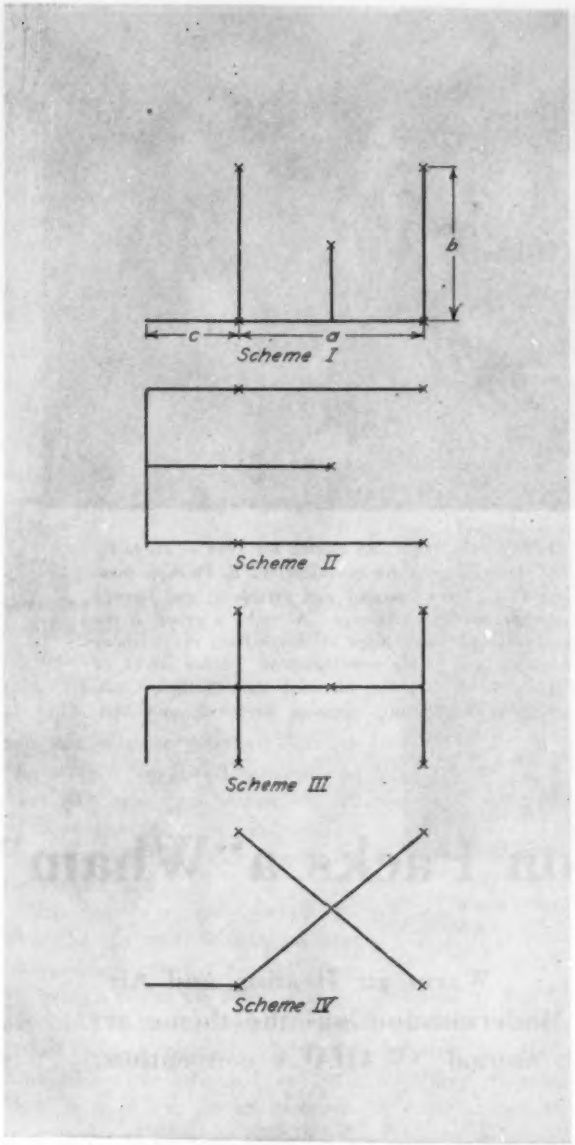


FIG. 8 — FOUR POSSIBLE SCHEMES for the duct layout in a large room, the fourth being for use where the ducts are hidden above a hung ceiling

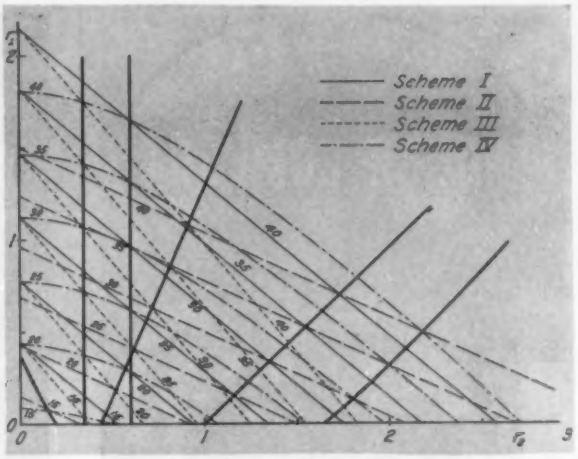


FIG. 9 — COMPARISON OF WEIGHTS — similar to the previous ones — for the four schemes sketched in Fig. 8

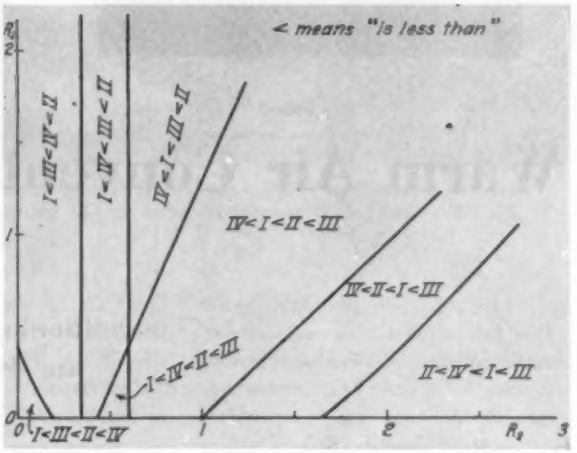


FIG. 10 — BOUNDARY LINES ONLY for the data plotted in Fig. 9. Note how superior Scheme IV turns out to be, says the author

What Such An Analysis May Show

The main conclusion to be drawn from these examples is that a casual guess as to the most economical duct layout may not always be correct and that a detailed analysis of different layouts may be warranted — particularly on repetitive jobs where a small saving per room may represent a substantial saving on the entire job.

It is to be remembered that the analysis in this article was quite arbitrary regarding air volumes and the design basis. The conditions shown on the graphs and the conclusions drawn from them may be quite erroneous even on a similar physical set-up due to different air volumes or other considerations. But the method of approach is valid, and the time spent on such an analysis may be well repaid.

Two rules in duct layout may be deduced which hold true fairly generally:

(1) Always let the air stream go forward, never doubling back. The doubling back consistently makes Scheme III less economical than Scheme I.

(2) Carefully consider if it is cheaper to combine several small ducts into one large one (which may necessitate a large aspect ratio and therefore an uneconomical duct size and often a heavier gage of metal) or to run separate branches to the different areas. This is the significance of the boundary lines on the graphs, which indicate where Scheme I ceases to be more economical than Scheme II.





AT LEFT ARE OFFICERS elected for 1954 — *(l. to r.)* G. W. Denges, first vice president; C. B. Phillips, president; F. L. Meyer, second vice president; and George Boeddener, secretary-treasurer. At right, a group at the annual cocktail party helps celebrate both the birthday and the election of the new president. Shown are *(l. to r.)* Mrs. E. W. Gogolin, Mr. and Mrs. Phillips, C. A. Olsen, W. D. Redrup, outgoing president, and Mrs. Redrup

Warm Air Convention Packs a "Wham"

Warm air Heating and Air conditioning Modernization was the theme at the 40th annual NWAHACA convention

THE 40TH ANNUAL CONVENTION of the National Warm Air Heating and Air Conditioning Association, held in Cleveland, started off with a "WHAM" on the morning of December 2, and "WHAM" continued as a theme for the remainder of the two day meeting. "WHAM" stands for "warm air heating and air conditioning modernization." Many of the 18 speakers on the convention program had advice on how to achieve maximum benefits from a modernization program. Others pointed to statistical figures (which recently have become available) that indicate the size of the modernization market, while still other speakers offered merchandising suggestions that would lead to greater sales volumes.

New officers elected for 1954 are C. B. Phillips, vice president, Surface Combustion Corp., president; G. W. Denges, vice president, Williamson Heater Co., first vice president; and F. L. Meyer, president, Meyer Furnace Co., second vice president. George Boeddener was re-elected secretary-treasurer.

New members elected to the board of trustees are E. A. Eichenberger, general manager, F. Meyer & Bro., Peoria, Ill.; C. L. Sapp, president, Farquhar Furnace Co., Wilmington, O.; J. F. Deane, general manager, International Sales Co., San Francisco, Calif.; and S. J. Levine, manager, Residential Heating Div., General Electric Co., Bloomfield, N. J.

Progress in 10 Year Span

Figures on the number of furnaces sold between 1940 and 1950 were given by Chas. E. Price, general manager of the American Artisan, who reported on a special tabulation prepared by the Bureau of Housing Census for the American Artisan for the 10 year period from 1940 to 1950. This report showed that the warm air heating industry had achieved a record — in respect to new installations, and in modernization work—of which it could be justly proud. These figures also show



W. D. REDRUP *(left)*, only charter member remaining in the association, receives from George Boeddener a commendation for the service he has rendered the association during the past 40 years



AMONG THE COMMITTEES which met during the convention were the college short course committee — *(l. to r.)* W. E. Garber, Jr., T. A. Wright, Ira Metcalf, Marvin Gould, Bruce McLouth, L. G. Miller, Bob Waalkes, C. H. Pesterfield, Bob Champlin, and Bob Irwin . . .



AND THE MANUAL 11 pilot committee — *(l. to r.)* George Sperl, Jim Martin, Guy Voorhees, Wilbur Senft, Al Newton, K. H. Flint, and L. A. Miles

the noteworthy gains of the warm air heating industry over other methods of heating residences. Mr. Price said, "It indicates striking evidence of public acceptance of a product and our efficient, effective distribution setup. The attractive picture of what has been done during the 10 year period tabulated indicates a most favorable business climate for the years ahead."

Mr. Price went on to point out some figures and percentages that indicate how good a job the warm air heating dealer has done. Nationally, in 1950, the number of centrally heated homes reached 12,015,264 compared with 7,927,462 in 1940. Thus, in a 10 year period there was an increase of 51.6 per cent in centrally heated homes. The increase totalled 4,087,802, of which 3,170,035 have central warm air heating plants. This represents 77.5 per cent of the increase. Mr. Price indicated that an increase of this kind represents a really great record for the warm air industry. It can be proud of this record because it has a product and a sales and installation service at the dealer level that appeals to the public.

New Warm Air Fields Ahead

Other speakers at the convention offered many suggestions for helping maintain such a favorable record. W. D. Redrup, chairman of the board of The Majestic Co. and immediate past president of National Warm Air Heating and Air Conditioning Association, reviewed the 40 years of association progress and in his remarks pointed out the step by step development of the foundation upon which the industry is based. Mr. Redrup credited much of the success to the unselfish contributions of time and technical know-how by those who have developed and revised the 11 manuals now accepted by architects, engineers and dealers as the standard practices for selecting, installing and adjusting warm air heating and residential air conditioning systems. There were more than $55,000 worth of the manuals sold during 1953.

In speaking of what the future holds for this industry, Mr. Redrup said, "There has recently been opened up an entirely new field—that of large buildings on slabs, including offices, factories, schools and many other non-residential buildings. There are dozens and dozens of such installations. We hear of new ones every week." Schools with a small duct perimeter system for each room, and others with two and three zones using dead end graduated trunk ducts that follow the perimeter walls are becoming more and more popular, he said.

Housing still looks very favorable, he said, and mentioned one of the mass producers of pre-fab houses who talks of 25,000 of one type of house. Some furnaces have been purchased for the first 10,000.

"The modernization market also offers a great potential," he stressed. "Manufacturers and jobbers who have connections geared to the replacement market may be in a very

(Please turn to page 141)

Housing Census Heating Data

Augusta, Ga. • Denver • Hartford • Rochester, N. Y. • Stockton, Calif. • Springfield, Ill.

SUGGESTIONS on how a warm air heating dealer can use some of the housing data available from the Bureau of Census were given in the May 1953 American Artisan. Localities covered in the reports are metropolitan areas that are socially and economically integrated with the central city. Data for various areas has been reported in American Artisan for June to December, inclusive. Additional reports will appear regularly.

Types of Fuel Used in Centrally Heated Dwelling Units

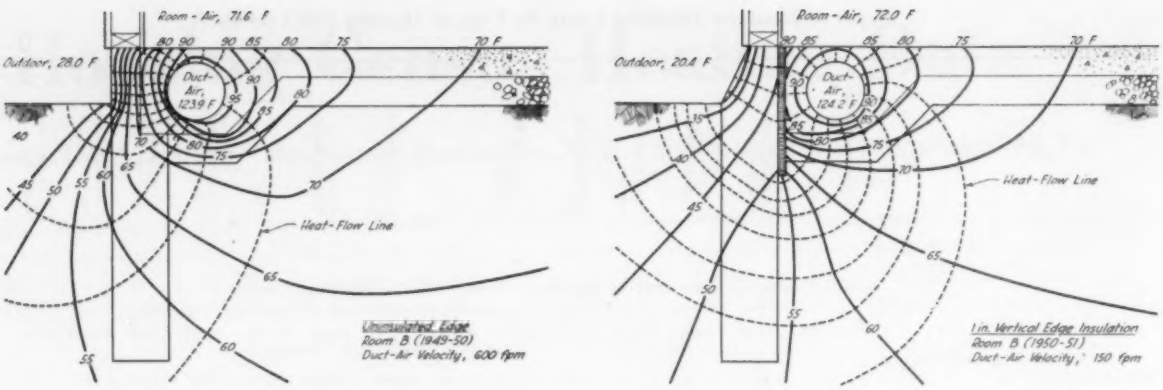
	Standard Metropolitan Areas										
	Augusta Ga.			Denver Colo.					Hartford Conn.	Rochester N.Y.	Springfield Ill.	Stockton Calif.
	The area	Richmond County	Aiken County, S.C.	The area	Adams County	Arapahoe County	Denver County	Jefferson County	Hartford County (Part)	Monroe County	Sangamon County	San Joaquin County
All dwelling units	45,058	29,828	15,230	181,410	11,301	16,111	133,690	20,308	103,456	147,923	41,848	61,430
Number reporting heating equipment	41,715	27,845	13,870	169,925	10,385	14,755	128,700	16,085	101,025	141,695	40,275	57,010
Central heating	4,985	4,190	795	125,615	4,115	7,760	105,535	8,205	78,885	124,460	28,535	24,025
Coal	1,425	1,240	185	15,235	1,080	825	11,795	1,535	25,750	82,305	20,290	120
Wood	135	100	35	340	15	30	275	20	290	395	95	115
Utility gas	675	625	50	104,545	2,095	6,180	91,255	5,015	5,095	17,275	5,370	21,460
Bottled gas	55	40	15	1,635	490	245	455	445	355	225	125	1,245
Liquid fuel	2,500	2,040	460	2,400	405	320	725	950	44,985	22,225	1,415	570
Other fuel	140	110	30	725	25	140	355	205	1,755	1,165	975	460
Not reporting	55	35	20	735	5	20	675	35	655	870	265	55

Types of Nonfarm Dwelling Units, by Type of Heating and Year Built

	Total occupied						Owner occupied			Renter occupied					
	Total	1 dwelling unit, detached	Other 1- and 2-dwelling unit	3 and 4 dwelling unit	5 to 9 dwelling unit	10 dwelling unit or more	Total	1 dwelling unit, detached	All other dwelling units	Total	1 dwelling unit, detached	Other 1- and 2-dwelling unit	3 and 4 dwelling unit	5 to 9 dwelling unit	10 dwelling unit or more
Standard Metropolitan Area of Augusta, Ga.—Richmond County, Ga., and Aiken County, S.C.															
All occupied units	37,425	26,185	6,255	3,055	1,155	775	15,655	13,800	1,855	21,770	12,385	4,785	2,730	1,100	770
HEATING EQUIPMENT															
Central heating	4,631	3,202	703	296	122	308	2,758	2,452	306	1,873	750	458	235	122	308
Piped steam or hot water	1,506	957	174	109	61	205	726	629	97	780	328	92	94	61	205
Warm air furnace	3,125	2,245	529	187	61	103	2,032	1,823	209	1,093	422	366	141	61	103
Noncentral heating, with flue	28,138	20,204	4,487	2,131	880	436	11,335	10,025	1,310	16,803	10,179	3,480	1,883	825	436
Nonctrl. htng., without flue; or not htd.	4,088	2,324	1,019	627	92	26	1,361	1,128	233	2,727	1,196	801	612	92	26
Not reported	560	453	46	...	61	...	195	195	...	365	258	46	...	61	...
YEAR BUILT															
1945 or later	6,051	4,696	560	647	...	148	3,618	3,587	31	2,433	1,109	529	647	...	148
1940 to 1944	2,713	2,366	101	113	44	89	1,944	1,944	...	769	422	101	113	44	89
1939 or earlier	27,550	18,267	5,431	2,263	1,056	533	9,664	7,995	1,669	17,886	10,272	4,055	1,970	1,056	533
Not reported	1,052	855	164	33	...	...	370	274	96	682	581	101	...	...	...
Standard Metropolitan Area of Denver, Colo.—Adams, Arapahoe, Denver and Jefferson Counties															
All occupied units	163,920	94,200	26,375	12,240	12,765	18,340	90,380	77,900	12,480	73,540	16,300	17,480	10,105	11,750	17,905
HEATING EQUIPMENT															
Central heating	120,652	67,889	18,709	8,737	9,598	15,719	69,363	59,271	10,092	51,289	8,618	11,541	6,949	8,752	15,429
Piped steam or hot water	33,932	11,022	3,817	1,916	4,247	12,930	10,915	8,966	1,949	23,017	2,056	2,694	1,568	3,946	12,753
Warm air furnace	86,720	56,867	14,892	6,821	5,351	2,789	58,448	50,305	8,143	28,272	6,562	8,847	5,381	4,806	2,676
Noncentral heating, with flue	33,046	20,918	6,348	2,553	1,987	1,240	16,681	14,834	1,847	16,365	6,084	4,901	2,330	1,874	1,176
Nonctrl. htng., without flue; or not htd.	6,134	3,445	744	667	699	579	2,783	2,531	252	3,351	914	636	593	661	547
Not reported	4,089	1,950	576	283	482	798	1,553	1,265	290	2,534	685	403	233	463	750
YEAR BUILT															
1945 or later	29,171	22,371	3,323	1,232	611	1,634	20,984	19,847	1,137	8,187	2,524	2,362	1,138	558	1,605
1940 to 1944	12,640	9,009	1,363	668	685	915	8,817	8,168	649	3,823	841	869	542	685	886
1939 or earlier	117,153	60,730	20,876	9,816	10,829	14,902	59,228	48,873	10,355	57,925	11,857	13,518	7,964	9,974	14,612
Not reported	4,958	2,089	815	524	640	890	1,350	1,011	339	3,608	1,078	733	461	533	803

Types of Nonfarm Dwelling Units, by Type of Heating and Year Built

	Total occupied						Owner occupied			Renter occupied				
	Total	1 dwelling unit, detached	Other 1- and 2-dwelling unit	3 and 4 dwelling unit	5 to 9 dwelling unit	10 dwelling unit or more	Total	1 dwelling unit, detached	All other dwelling units	Total	1 dwelling unit, detached	Other 1- and 2-dwelling unit	3 and 4 dwelling unit	5 to 9 dwelling unit	10 dwelling unit or more
Standard Metropolitan Area of Hartford, Conn.—Part of Hartford County															
All occupied units	96,320	35,640	18,670	16,425	13,510	12,075	42,145	31,405	10,740	54,175	4,235	11,905	13,170	12,950	11,915
HEATING EQUIPMENT															
Central heating	74,917	32,344	15,009	10,566	6,810	10,188	38,495	29,442	9,053	36,422	2,902	9,066	7,903	6,443	10,108
Piped steam or hot water	55,597	22,209	10,000	7,492	6,106	9,790	26,789	20,360	6,429	28,808	1,849	5,785	5,674	5,758	9,742
Warm air furnace	19,320	10,135	5,009	3,074	704	398	11,705	9,082	2,624	7,614	1,053	3,281	2,229	685	366
Noncentral heating, with flue	16,753	2,487	2,862	4,764	5,420	1,220	2,696	1,387	1,309	14,057	1,100	2,209	4,278	5,266	1,204
Nonctrl. htng., without flue; or not htd.	3,690	558	715	941	1,089	387	555	347	208	3,135	211	589	878	1,070	387
Not reported	962	254	84	155	190	279	398	231	167	564	23	42	113	171	215
YEAR BUILT															
1945 or later	7,684	6,227	363	472	275	347	6,013	5,827	186	1,671	400	256	393	275	347
1940 to 1944	11,799	6,974	2,323	759	1,210	533	6,362	6,255	107	5,437	719	2,216	759	1,210	533
1939 or earlier	75,031	21,908	15,535	14,801	11,778	11,009	29,185	18,845	10,340	45,846	3,063	9,064	11,652	11,218	10,849
Not reported	1,810	534	449	393	247	187	587	481	106	1,223	53	369	367	247	187
Standard Metropolitan Area of Rochester, N. Y.—Monroe County															
All occupied units	133,910	73,660	31,080	13,860	7,260	8,050	80,680	64,990	15,690	53,230	8,670	18,395	11,490	6,745	7,930
HEATING EQUIPMENT															
Central heating	116,578	64,016	27,648	11,600	6,137	7,177	71,308	57,101	14,207	45,270	6,915	15,985	9,572	5,701	7,097
Piped steam or hot water	26,954	9,583	5,277	3,612	2,891	5,591	11,040	8,690	2,950	15,914	1,493	3,255	2,929	2,673	5,564
Warm air furnace	89,624	54,433	22,371	7,988	3,246	1,586	60,268	49,011	11,257	29,356	5,422	12,730	6,643	3,028	1,533
Noncentral heating, with flue	12,601	7,302	2,561	1,619	646	473	7,182	6,051	1,131	5,419	1,251	1,761	1,341	606	460
Nonctrl. htng., without flue; or not htd.	2,168	1,252	312	351	209	44	1,186	1,076	110	982	176	223	330	209	44
Not reported	2,565	1,091	557	291	270	356	1,005	762	243	1,560	329	424	248	230	329
YEAR BUILT															
1945 or later	9,076	7,291	237	246	291	1,011	7,250	7,196	54	1,826	95	183	246	291	1,011
1940 to 1944	4,455	4,320	80	...	...	55	4,279	4,225	54	176	95	26	...	...	55
1939 or earlier	116,573	60,694	29,676	13,066	6,678	6,459	67,752	52,639	15,113	48,821	8,055	17,452	10,752	6,163	6,399
Not reported	3,801	1,353	1,085	547	291	525	1,395	927	468	2,406	426	733	491	291	465
Standard Metropolitan Area of Springfield, Ill.—Sangamon County															
All occupied units	36,250	25,410	5,380	2,555	1,770	1,135	22,620	20,135	2,485	13,630	5,275	3,475	2,105	1,680	1,095
HEATING EQUIPMENT															
Central heating	26,723	17,488	4,249	2,296	1,638	1,052	16,514	14,435	2,079	10,209	3,053	2,681	1,896	1,557	1,022
Piped steam or hot water	5,998	1,722	1,236	911	1,174	955	1,919	1,380	539	4,079	342	879	786	1,147	925
Warm air furnace	20,725	15,766	3,013	1,385	464	97	14,595	13,055	1,540	6,130	2,711	1,802	1,110	410	97
Noncentral heating, with flue	8,207	6,983	943	187	70	24	5,244	4,932	312	2,963	2,051	665	162	61	24
Nonctrl. htng., without flue; or not htd.	854	690	107	23	...	34	553	543	10	301	147	107	23	...	24
Not reported	464	250	81	48	61	24	311	226	85	153	24	21	23	61	24
YEAR BUILT															
1945 or later	3,655	3,161	388	75	31	...	2,917	2,783	134	738	378	254	75	31	...
1940 to 1944	2,430	1,822	339	50	...	219	1,680	1,680	...	750	142	339	50	...	219
1939 or earlier	29,390	19,839	4,541	2,355	1,739	916	17,645	15,321	2,324	11,745	4,518	2,797	1,905	1,649	876
Not reported	775	588	112	75	...	...	378	351	27	397	237	85	75	...	...
Standard Metropolitan Area of Stockton, Calif.—San Joaquin County															
All occupied units	49,775	39,265	4,325	3,205	1,530	1,450	29,165	27,710	1,455	20,610	11,555	3,295	2,895	1,450	1,415
HEATING EQUIPMENT															
Central heating	21,860	18,292	1,466	1,027	453	622	15,783	15,224	559	6,077	3,068	1,003	949	453	604
Piped steam or hot water	2,105	1,268	132	185	45	476	1,020	942	78	1,086	326	72	185	45	458
Warm air furnace	19,754	17,024	1,334	842	408	146	14,763	14,282	481	4,991	2,742	931	764	408	146
Noncentral heating, with flue	20,874	15,078	2,305	1,908	896	687	10,355	9,638	717	10,519	5,440	1,862	1,714	816	687
Nonctrl. htng., without flue; or not htd.	6,326	5,239	531	271	181	104	2,637	2,497	140	3,689	2,742	430	232	181	104
Not reported	714	655	20	...	...	39	388	350	38	326	305	...	...	...	21
YEAR BUILT															
1945 or later	13,030	11,309	1,045	142	269	265	8,988	8,593	395	4,042	2,716	712	142	242	230
1940 to 1944	6,037	4,700	351	823	97	66	3,634	3,573	61	2,403	1,127	290	823	97	66
1939 or earlier	28,929	21,935	2,688	2,185	1,068	1,053	15,832	14,889	943	13,097	7,046	2,082	1,901	1,015	1,053
Not reported	1,776	1,318	241	54	97	66	708	652	56	1,068	666	211	28	97	66



1 THE SAME PANEL HEATING effect was obtained with uninsulated (*left*) and insulated (*right*) slab edge, but subfloor heat loss was greater for the uninsulated edge. (Solid lines show equal temperatures; dotted lines, paths of heat flow.)

Slab Floor Heat Losses Reduced with Edge Insulation

. . . of various materials, thicknesses and constructions (vertical or L shaped). The different types of heat loss are explained as well as factors, such as outdoor temperature, affecting them

By S. Konzo

University of Illinois

IN THE PREVIOUS article, information was given on the surface temperatures of a floor slab in which warm air ducts were embedded, both at the edge of the slab and in the middle of the slab. These studies were conducted in the Floor Slab Laboratory at the University of Illinois. This article will cover some additional practical studies conducted there.

Previous investigations on the heat losses from unheated concrete floor slabs gave floor losses from 40 to 75 Btu per hr for each linear foot of exposed edge, the amount depending upon the type and amount of edge insulation. In a small home this floor loss would amount to from 10 to 20 per cent of the total heat loss. When the outer edge of the floor is heated, either by perimeter heating or floor panel heating, even larger heat losses from the floor slab can be anticipated. Hence, adequate insulation of the floor slab is necessary in order to avoid excessive fuel consumption.

[Parts of this article are abstracted from the complete report, Heat Emission Characteristics of Warm Air Perimeter Heating Ducts, by J. R. Jamieson, R. W. Roose, H. T. Gilkey, and S. Konzo, University of Illinois Engineering Experiment Station Bulletin 412.]

How Subfloor Losses Vary

The heat flow from the surface of the perimeter duct is transmitted in three directions:

1) To the floor above.
2) Downward to the ground.
3) Outward through the foundation wall to the outdoor air.

The sum of items 2 and 3 is referred to as the *subfloor loss*, and represents heat which is not available for heating the occupied space.

The subfloor losses for four types of edge construction are shown in Fig. 1. The following conclusions

Table 1—Edge Loss Variation with Changes in Outdoor Air Temperature

Outdoor Design Temp. (F)	Subfloor Heat Losses (in Btu per Hr. for Each Lineal Ft of Exposed Edge) *	
	2 in. L type insulation (Btu per hr)	1 in. vertical insulation (Btu per hr)
25	40	55
10	55	75
0	65	85
−10	75	95
−20	85	105

*These values are for a room width of 12 ft. For rooms over 12 ft wide, add 2 Btu for each additional foot of width to the above values.

were drawn from these studies:

1) The largest subfloor losses were obtained when no edge insulation was used. With 1 in. thick edge insulation, the subfloor losses were reduced about 30 per cent, and with 2 in. thick edge insulation, the reduction was about 50 per cent. In other words, the 2 in. thick insulation is preferred, but in practice the 1 in. insulation is more commonly used.

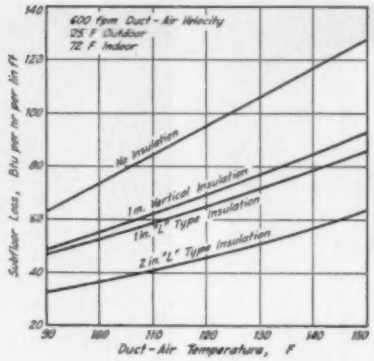
2) The subfloor losses increased as the duct air temperature was increased. This increase was particularly noticeable with the uninsulated floor slab. The practical application of this trend is that a high temperature air system will not be as satisfactory as a low temperature system. In other words, if the duct system is restricted so that the air flow is not adequate, the circulating air temperature will be high and the subfloor losses will also be high.

3) The values shown in Fig. 1 were for a 25 F outdoor air temperature. The losses increased as the outdoor temperature decreased. For design purposes, the values shown in Table 1 were established.

Observe Heat Flow

A large number of temperature measuring instruments (thermocouples) were placed in the soil, gravel, and floor slab of each of the test rooms, for the purpose of determining the temperatures that existed at various points. Two of the diagrams made, showing lines of equal temperatures, comprise Fig. 2. The solid line curves show the lines of equal temperatures, and are similar to contour lines that show differences in elevations. The upper diagram is for the insulated slab edge and the lower is for the uninsulated slab edge. The dotted lines show the

(Please turn to page 162)



2 SUBFLOOR HEAT LOSSES varied with the type of edge insulation applied

How We Got Where We Are In

WARM AIR PERIMETER HEATING

the *13th* in a series planned to tell about:

- **Investigations in the Research Residences at the University of Illinois**
- **Design and installation data (condensed from manuals published by the National Warm Air Heating and Air Conditioning Association)**
- **Specific phases of warm air heating**

. . . in articles so far:

heating basementless homes, warm air ceiling panels, heating slab floor homes with ceiling and floor panel systems, floor panel-convection heating for slab floor homes — partially open and completely open, survey of field practices

Table 2—Percentage of Heat Flow with and without Insulation

	[illegible] Insulation		No Edge Insulation	
	Btu per hr	Per cent	Btu per hr	Per cent
Heat gain into room	234	37	243	32
Heat loss through edge insulation	145	22	0	0
Heat loss by-passing edge insulation	271	41	517	68
[illegible]	660		760	

Table 3—Durability Study of Materials for Edge Insulation

Sample No.	Description	Thickness (in.)	Avg Density (lb/cu ft)	Conductivity at 70 F as Rept'd by Mfg	Weight (lb) Initial	Weight (lb) Final	Moisture Increase (%)	Final Condition of Lower 10 in. of Specimen
1.	Cane fiberboard* for sheathing painted asphalt coating	25/32	19	0.33	1.74	(†)	(†)	Very moist, badly deteriorated
2.	Wood fiberboard* for sheathing	25/32	26	0.33	2.69	2.90	(†)	Very moist, slight deterioration, some delamination
3.	Asphalt-impregnated cane fiberboard for expansion joints	1	28	. . .	3.47	3.71	(†)	Moist throughout
4.	Asphalt-impregnated cane fiberboard for expansion joints	1	24	. . . .	2.92	3.30	13	Moist throughout
5.	Fiberboard for expansion joints, asphalt-impregnated glass	1	20	0.33	2.49	2.61	9	Damp throughout
6.	Fiberboard, asphalt-enclosed glass	1	6	0.27	1.86	1.93	4	Good
7.	Cane fiberboard for roof insulation	1	19	0.33	2.39	2.87	20	Very moist, some delamination
8.	Corkboard, coated with asphalt	2	10	0.30	2.41	(‡)	(‡)	Good
9.	Cellular board, glass	2	10	0.42	2.47	2.50	1	Good

*Not recommended by manufacturer for use as edge insulation, but is frequently installed by builder.

†Disintegration of specimen during test created unusually low and fictitious values.

‡Some gravel adhered to coating of asphalt (applied hot), rendering an erroneous final weight.



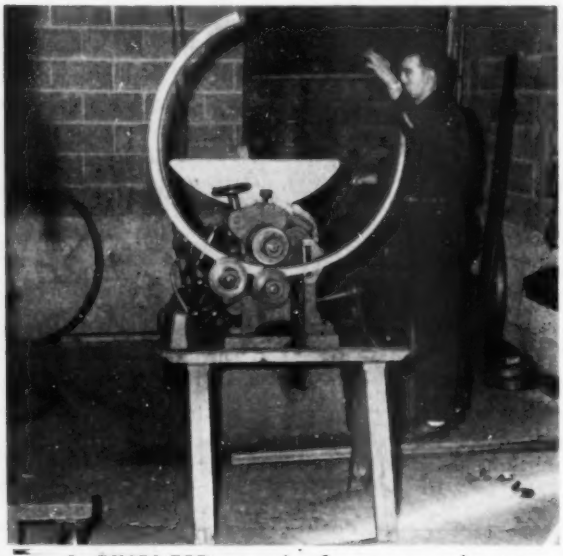
1 BY FABRICATING a wide variety of equipment, such as the machinery guard shown in foreground . . .



2 AN ELECTRIC CABLE TROUGH (fabricating process being supervised by L. B. McConnell, president) for a television studio . . .



3 A DUST COLLECTOR for a tool manufacturing plant . . .

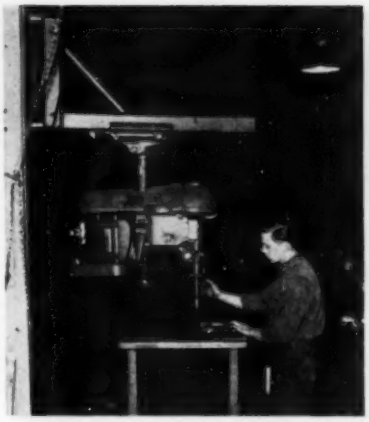


4 RINGS FOR companion flanges on an exhaust stack . . .



5 AND STEEL DECKING for a new roof on a manufacturing plant . . .

Sheet Metal Shop Proves — "Versatility Brings Success"



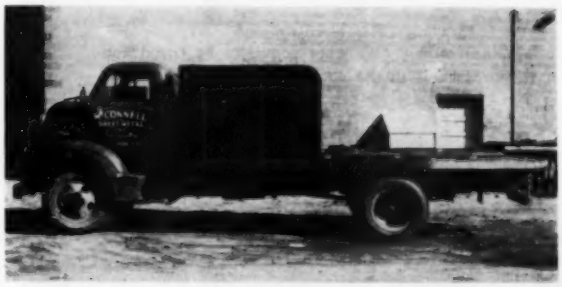
6 TO MEET its special needs, the shop developed this radial drill . . .



7 HIGH SPEED friction saw . . .



8 PORTABLE LP gas soldering furnace . . .





9 AND SPECIAL TRUCK BODIES to facilitate delivery of heavy roof decking *(left)* and unloading and loading of ladders *(right)*

Trained staff develops new tools, equipment, and organizational plans to assure continued success

"A SHEET METAL shop with a reputation for being able to handle almost any size and type of job is bound to succeed and grow," according to L. B. McConnell, president of the McConnell Sheet Metal Co., Lansing, Mich. His own shop is a case in point. It has grown as it has become increasingly known for the variety of products it fabricates. Behind these products is a well trained staff which uses ingenuity in finding new ways to organize and expedite the work at hand and to develop special tools for special jobs. An intensive apprentice training program is an important factor in maintaining the high quality of the staff.

Five years ago, the McConnell company moved into its new 4000 sq ft shop. It was soon found that more space was needed, and a 4000 sq ft addition was made. A year later, still another 4000 sq ft section was added. Each time a section was added, more office space was provided for engineering, sales and administration.

The versatility of the shop is attested to by the variety of products fabricated. One specialty is a machinery guard with retaining lugs welded in (Fig. 1, foreground). This guard is made for a manufacturer who requires many special pieces of equipment of 10 gage sheet steel. Other products include an electric cable trough for use in a new television studio (Fig. 2) and a dust collector (Fig. 3) designed to eliminate dust created in the sharpening process at a tool manufacturing plant. Fig. 4 shows an angle iron rolling machine preparing rings for companion flanges to be used on an exhaust stack for a ventilating system. A steel deck for a new roof going on a manufacturing plant is shown in Fig. 5 This is one of four similar buildings in this contract. Here the peak of the old roof can be seen beneath the new decking (the sides were raised 12 ft). After the new roof was completed, the old roof was removed and the added headroom in the building was utilized by the manufacturer to install a modern conveyor system.

Shop Develops Own Tools, Equipment

To produce this wide range of products, the shop is equipped with many pieces of modern equipment, some of which have been developed by the staff itself to meet special needs.

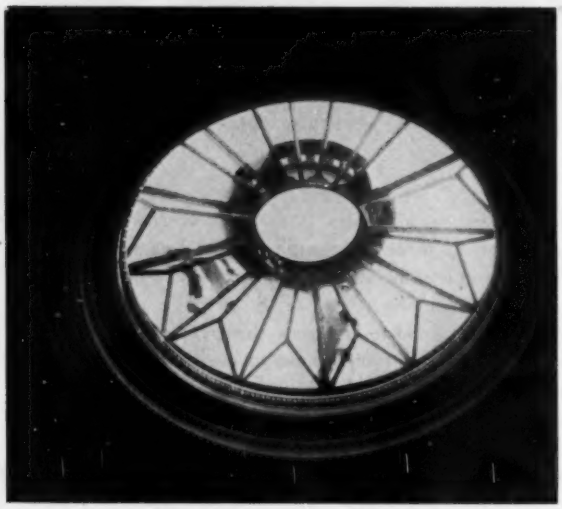
One tool developed to make working conditions safer and fabrication easier is the radial drill shown in Fig. 6. This drill can be swung into any position, raised or low-

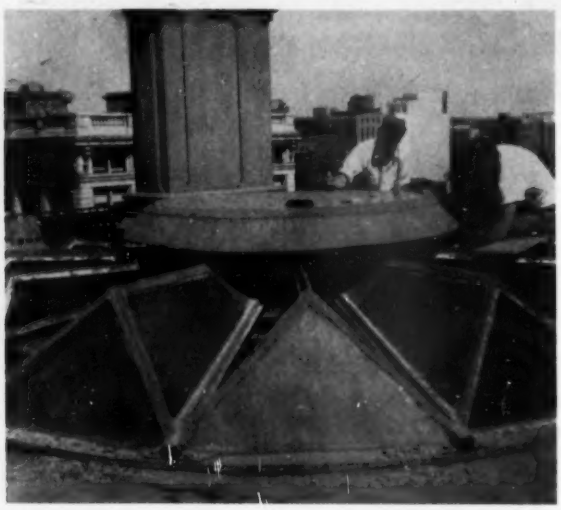
(Please turn to page 157)





LEAKS DUE to the apparent weakness of the entire roof (in use for many years) were found to be cured and future leaks prevented by thorough tinning and resoldering of the old seams in the copper gutter *(left)* and the ends of the standing seams *(right)*





SHADOWS SEEN through the skylight *(left)* in the roof of the President's executive offices are cast by the men outside *(right)* removing the heavy glass as a step in the renovation process

Repairing the Roof Over Our Head of State

The author's sheet metal shop is keeping the President dry by repairing the roof and skylights over the Executive Offices





LOW CURB on the trap door *(left)* above the President's press conference room was a source of leaks and required raising *(right)* to be above water level during heavy rains



ANOTHER SOURCE of roof leaks, the old flag pole, was removed and the roof repaired by sealing the opening with a new copper cap





NEW GALVANIZED IRON CORNICES were fastened over the old cast iron decorations *(left)* which were in common use when the building was erected. Vinegar is used to clean the cornices *(right)* as preparation for painting them

By Lawrence E. Gichner

Sheet Metal Contractor

ONE OF THE most intriguing roof repair jobs handled by our firm in years is now being completed on the Executive Offices of the President of the United States. In addition to the importance of the structure and the national and international significance of the leader who works there, there were many unusual features of the job that made it different and challenging.

The offices occupy an entire block. The huge roof covering them could have given trouble in any of a number of places less significant than where trouble did start — the assembly room in which the President holds press conferences with newsmen of the world. The persistent dripping proved most annoying to both the Truman and the Eisenhower administrations.

The leak was studied during rainy weather, and it was found that the water was working its way in from a trap door in a tower some 60 ft above the room. The curb on the trap door was but 1 in. high, and it only required a slight wind to blow and whip a substantial flow of water underneath and on its way. Once the facts were ascertained, it was simple to proceed with the logical remedy — to build the curbing up higher.

Built for Eternity, But Needs Repairs Now

This building was once our State Department, and in design and construction, it is different from any other structure on our local scene. The architects must have intended it to last for eternity, judging from its solidity. The entire exterior is composed of granite, hand-hewn. There is an unusual amount of thick, heavy cast iron used on door jambs, cornices, columns, and ornate trim.

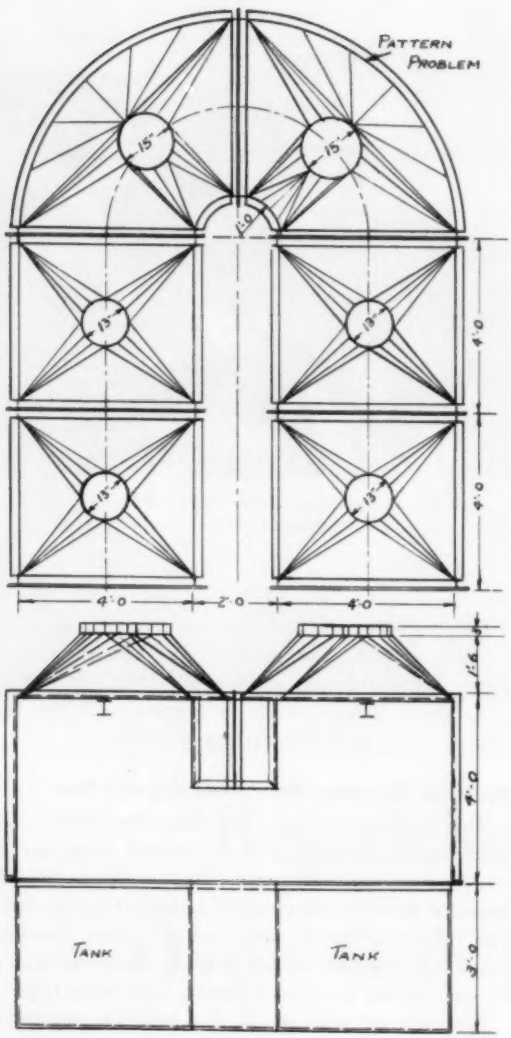
However, in spite of all, the need for repairs does occur, though the building has held up wonderfully well. Slate will crack, cast iron rusts, copper wears, skylight glass breaks, and rain will bore its penetrating way into

(Please turn to page 146)

HUGH REID'S SHEET METAL PATTERN

Special Hood for Partly Round Tank

. . . has a round top for duct attachment and a base consisting of two straight sides and a 90 deg arc



1 THE TWO partially rounded hoods in this plating tank exhaust system illustrate the pattern problem

A PLATING TANK exhaust system (Fig. 1) illustrates the application of a hood with a round top and a base comprising two straight sides and a 90 deg arc (Two such hoods are used for a complete installation, as shown.) In the design of a system of this type, the first consideration is the design volume and velocity necessary to exhaust the acid fumes. Assume that the operation is chromium plating. Then the design exhaust requirement in cfm per sq ft of surface tank area is 150 cfm for a 100 per cent enclosed suction hood system, when the plating bath is an arsenic solution, and the recommended velocity is 2500 fpm, according to the 1953 Heating, Ventilating, Air Conditioning Guide published by the American Society of Heating and Ventilating Engineers. Fig. 1 shows four tanks 4 ft square, and two tanks totaling 180 deg, with an outside radius of 5 ft and an inside radius of 1 ft. The surface area of one square tank is 4 ft × 4 ft, equaling 16 sq ft. The cfm requirement for one tank is 16 × 150, or 2400 cfm.

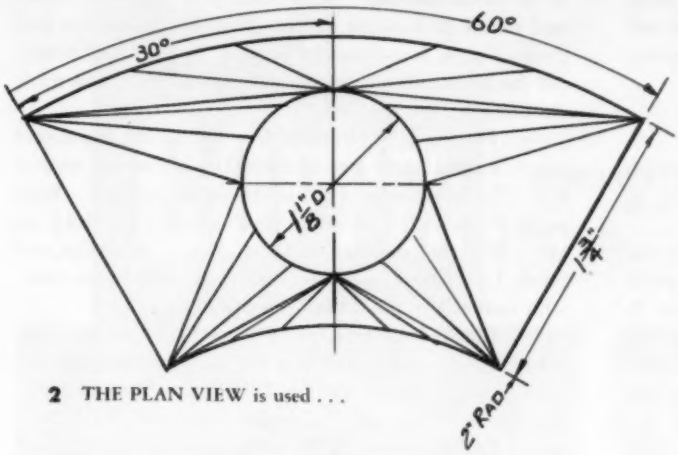
To find the diameter of the square hood exhaust duct, divide the calculated cfm by the given velocity. Thus, 2400 ÷ 2500 = 0.96 sq ft which is equal to a 13 in. diameter duct.

To calculate the surface area of the 180 deg end section of the tank, multiply the center line radius by the constant 3.14, and the product by the given width of the tank. Thus, constant 3.14 × center line radius 3 ft = 180 deg arc length, 9.42 ft. Product 9.42 ft × tank width 4 ft = 37.68 sq ft. The end section is divided into two hood sections at 18.84 sq ft. Thus, area 18.84 × 150 cfm per sq ft = 2826 cfm. Volume 2826 cfm ÷ velocity 2500 = 1.13 sq ft, or a 15 in. diameter duct.

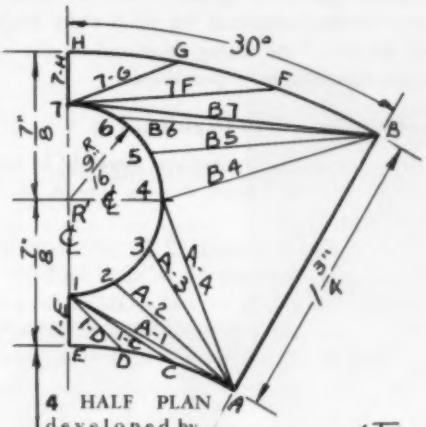
The total exhaust for the four square hoods and the two 90 deg hoods is [(2,400 × 4) + (2,826 × 2)] or 15,252 cfm.

With the known volume in cfm and velocity in fpm, the exhaust main and branches can be determined.

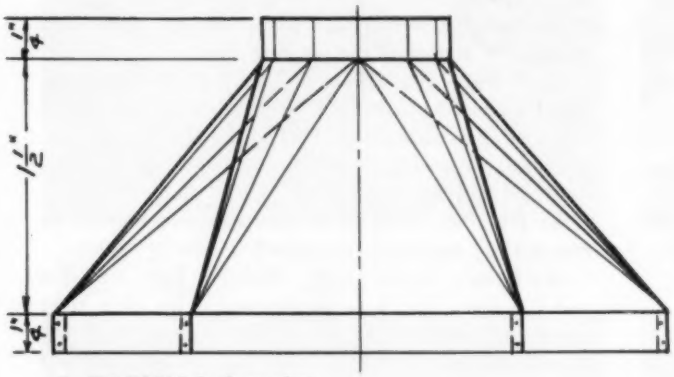
Note that in the pattern development for a problem of this type (see Fig. 5), the section which is bounded by points A, B, 7′ and 1′ is identical to a square to round development. In the development of sections 7′-B-H′ and 1′-A-E′ (see Fig. 4), the radii B-H and A-E are divided evenly into an adequate number of equal spaces to assure accuracy, and working lines are drawn from the



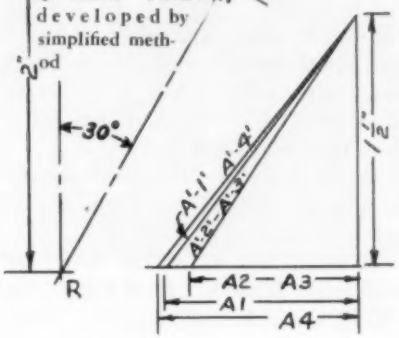
2 THE PLAN VIEW is used . . .

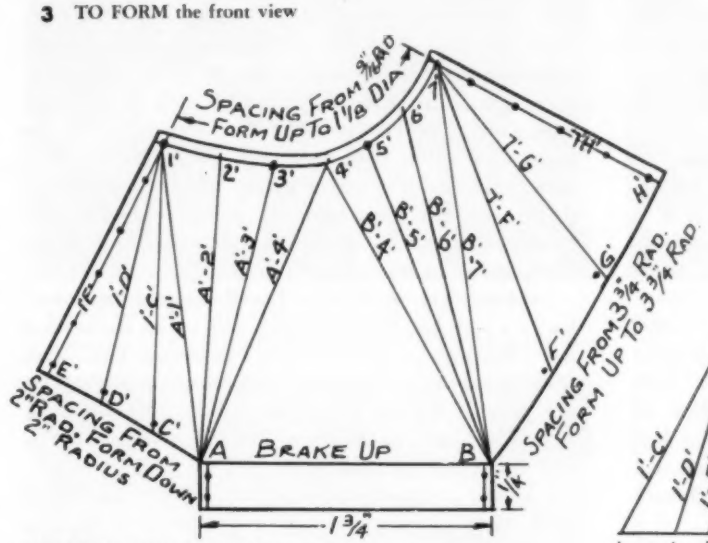


4 HALF PLAN developed by simplified method

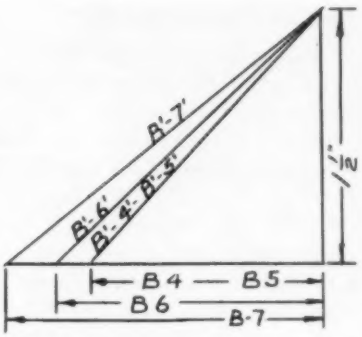


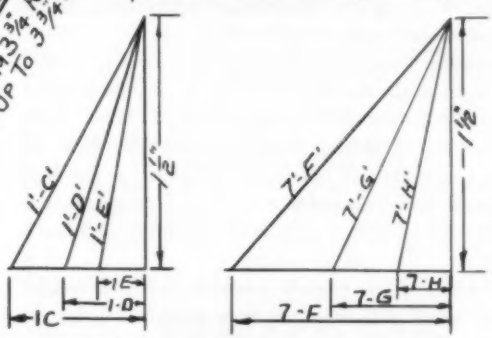
3 TO FORM the front view



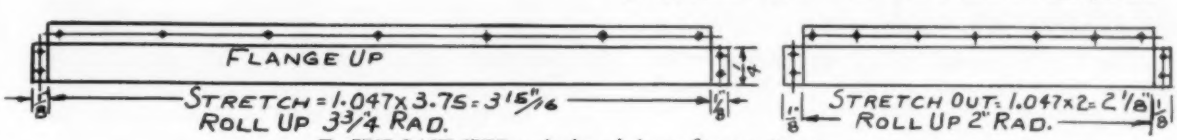


5 ONE HALF PATTERN is required as shown. Another is needed for the opposite side





6 TRUE LENGTH LINES used to form the half pattern



7 THE LAST STEP — back and throat flange patterns

equally spaced points to points 1 and 7; these lines, transferred to the horizontal leg of a right angle and the given height of the fitting measured on the vertical leg, will produce the developed lines.

To Construct Half Plan Drawing, Fig. 4

(a) Draw the vertical center line marked CL, establish point R, and from this point draw a line at 30 deg to the vertical center line.

(b) From point R measure 2 in. and establish the point E. From E, measure 7/8 in. and mark the point R′. From R′, measure 7/8 in. and establish the point H.

(c) With R as center and radius R-E, draw an arc to intersect the 30 deg line at A. With R as center and radius R-H, draw an arc to intersect the 30 deg line at B.

(d) With R′ as center and radius 9/16 in., draw a half circle, divide the half circle into six equal spaces, and number the points 1, 2, 3, 4, 5, 6 and 7. From point B, draw work lines to points 4, 5, 6 and 7. From point A draw lines to points 4, 3, 2 and 1.

(e) Divide the 30 deg arc H-B into three equal spaces and establish points G and F. From point 7 draw lines to points H, G, F and B.

(f) Divide the 30 deg arc E-A into three equal spaces and establish points D and C. From point 1, draw lines to points E, D, C and A.

To Lay Out Half Pattern, Fig. 5

(a) Draw the horizontal line A-B which is 1¾ in.

(b) Draw a right angle. On the vertical line measure 1½ in. Transfer line B-4 from Fig. 4 to the horizontal leg. The hypotenuse line B′-4′ is the developed line. With point B, Fig. 5, as center and radius B′-4′, draw an arc.

(c) On a right angle, transfer length A-4 from Fig. 4 to the horizontal leg and measure the given height, 1½ in., on the vertical leg. The hypotenuse line A′-4′ is the true length line. With point A on Fig. 5 as center and radius A′-4′, cut the arc which was formed using B′-4′ as radius and mark the point 4′.

(d) Transfer line A-3 from Fig. 4 to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse A′-3′ is the developed line. With point A on Fig. 5 as center and radius A′-3′, draw an arc. Set a compass at one equal division on the half circle, Fig. 4, and with point 4′ on Fig. 5 as center, cut the arc which was formed with A′-3′ as radius, and mark the point 3′.

(e) Working from Fig. 4, transfer line A-2 to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse line A′-2′ is the developed line. With point A on Fig. 5 as center and radius A′-2′ draw an arc. With compass setting 3-2 on the half circle, Fig. 4, as radius and point 3′ on Fig. 5 as center, cut the arc which was made with radius A′-2′, and mark the point 2′.

(f) Line A-1, Fig. 4, is the horizontal leg of a right angle and 1½ in. is the vertical leg. The hypotenuse A′-1′ is the developed line. With point A of Fig. 4 as center and radius A′-1′, draw an arc. With arc 2-1 on the half circle, Fig. 4, as radius and point 2′ on Fig. 5 as center, cut the arc which was made with radius A′-1′. and mark the point 1′.

(g) From Fig. 4, transfer line 1-C to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse 1′-C′ is the developed line. With point 1′ on Fig. 5 as center and radius 1′-C′, draw an arc. With arc distance A′-C′ on Fig. 4 as radius and point A on Fig. 5 as center, cut the arc which was made with radius A′-C′, and mark the point C′.

(h) Line 1-D is transferred from Fig. 4 to the horizontal leg of a right angle and 1½ in. is measured on the vertical leg. Hypotenuse line 1′-D′ is the developed line. With point 1′ on Fig. 5 as center and radius 1′-D′, draw an arc. With distance C-D on Fig. 4 as radius and point C′ on Fig. 5 as center, cut arc which was made with radius 1-D, and mark the point D′.

(j) Transfer line 1-E from Fig. 4 to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse line 1′-E′ is the true length line. With point 1′ on Fig. 5 as center and radius 1′-E′, draw an arc. Measure arc D-E on Fig. 4 and with point D′ on Fig. 5 as center, cut the arc which was made with radius 1′-E′, and mark the point E′.

(k) Draw a right angle. Transfer lines B-5, B-6 and B-7 from Fig. 4 to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse lines B′-5′, B′-6′ and B′-7′ are the developed lines. With point B on Fig. 5 as center and radii B′-5′, B′-6′, and B′-7′, draw arcs in the same sequence as the corresponding lines appear on Fig. 5. Set a compass at equal space 4-5 on the 9/16 in. half circle, Fig. 4, and with point 4′ on Fig. 5 as center cut the arc which was made with radius B′-5′, and mark the point 5′. With point 5′ on Fig. 5 as center, cut the arc which was made with radius B′-6′, and mark the point 6′. Using point 6′ as center, cut the arc which was made with radius B′-7′, and mark the point 7′.

(l) From Fig. 4, transfer line 7-F to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse 7′-F′ is the developed line. With point 7 on Fig. 5 as center 7′-F′, draw an arc. With arc distance B-F on Fig. 4 as radius and point B on Fig. 5 as center, cut the arc which was made with radius 7′-F′ and mark the point F′ .

(m) On a right angle, transfer line 7-G from Fig. 4 to the horizontal leg and measure 1½ in. on the vertical leg. The hypotenuse line 7′-G′ is the developed line. With point 7′ on Fig. 5 as center and radius 7′-G′ draw an arc. Set a compass at arc distance F-G on Fig. 4 and with point F′ on Fig. 5 as center, cut the arc which was made with radius 7′-G′, and mark the point G′.

(n) Transfer line 7-H from Fig. 4 to the horizontal leg of a right angle and measure 1½ in. on the vertical leg. The hypotenuse line 7′-H′ is the true length line. With point 7 on Fig. 5 as center and radius 7′-H′, draw

(*Please turn to page* 162)

Another case of COPPER where it counts!

CONTINENTAL CAN BUILDING
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THIS HELICOPTER VIEW of the Continental Can Bldg., at 42nd St. & Park Ave., shows the non-rusting Revere Copper roof that recently replaced one of non-metallic material. There were 25,000 lbs. of "ageless" copper used for the new roof, batten type expansion joints, coping covers, cap and miscellaneous flashing.



HERE YOU SEE Pete Savino, foreman with Sam Sancton and Carl Carlson working on a section of the flat seam roof of 20 oz. Lead Coated Revere Copper. Note that the latter is using two nails per cleat in accordance with the best installation practices as recommended in Revere's Booklet, "COPPER AND COMMON SENSE."



PROPER SPACING of expansion joints in relation to weight of copper used is a mighty important item in a trouble-free installation. Here you see Pete Savino and John Mossner measuring expansion joint on coping cover to make sure it is in the proper location as indicated on the architect's plans. 20 oz. Cold Rolled Lead Coated Revere Copper was used on coping covers.



FINISHING TOUCHES being put on the chimney flashing where it joins the roof, by Donald O'Connor. Sheet metal men prefer to work with copper because it is so easy to solder and so readily worked and cut to any desired shape. In fact no other metal or alloy has all the desirable construction characteristics of copper. That's why it's preferred.



PREFORMED CAP FLASHING being soldered into place by Joe Straka. Much installation time is saved by prefabricating such pieces in the shop.

NOTE TO SHEET METAL MEN: Revere is doing everything possible to build your reputation for quality work . . . to make your job more desirable by urging architects and engineers, in its advertising and sales literature, to specify the metal you prefer . . . copper.

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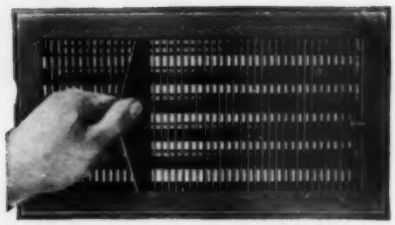
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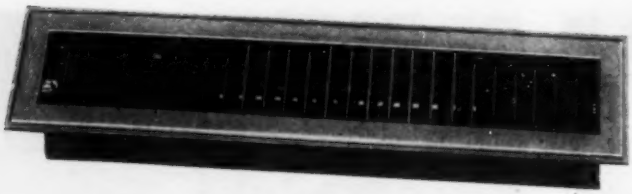
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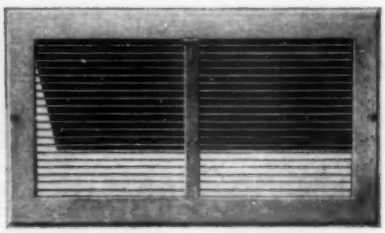
No. 800 Round Ceiling Outlet Damper



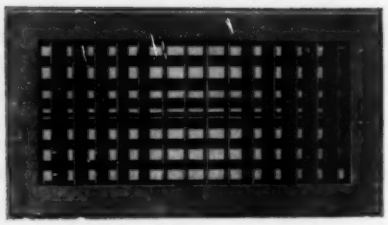
No. 256 Multiple Valve A-C Register



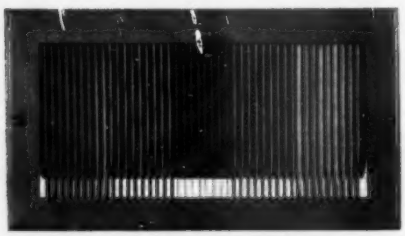
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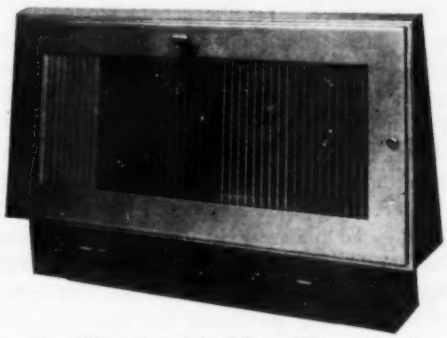
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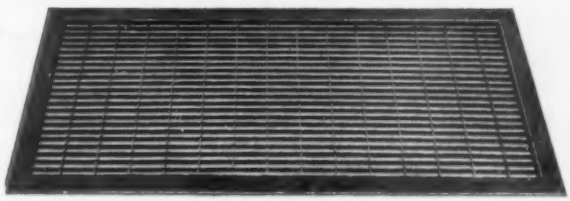
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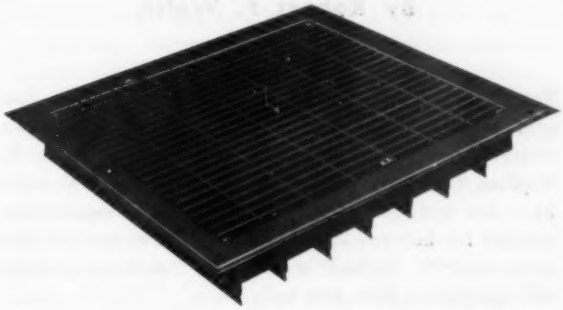
No. 132¼ Out-of-Wall Base Diffuser (Small Pipe)



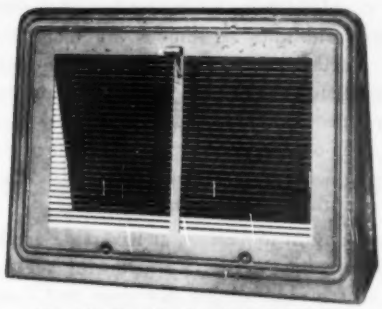
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Selling Mechanical Cooling for Homes in Dry Climates

A California dealer has greatly increased sales by a combination of sound engineering and an aggressive sales program

By Robert F. Welch

TRI-CITY CLIMATE CONTROL CO., Riverside, Calif., has probably installed as many residential refrigeration units as any firm in southern California. Since Thomas E. Topham took over as general manager in 1950, sales have shot upward 250 per cent. Residential installations account for between 25 and 30 per cent of total volume today, and Mr. Topham is convinced that the proportion will increase as time goes on.

An examination of the company's air conditioning methods is enlightening for a number of reasons. Both engineering and sales techniques are modern and progressive. Furthermore, Tri-City operates in two locations which represent a good cross section of conditions which would be encountered in many different parts of the country. The organization's growth and means of achieving it are typical of what many air conditioning dealers will be going through in the near future.

The company headquarters at Riverside are located in an area where it gets very warm during the day in the summer season, but nights are cool and comfortable. A branch office is maintained at Indio, where a high-temperature desert climate prevails.

Sound Engineering Makes Sales

Mr. Topham feels that the best way to increase sales — to build a reputation in the area for the firm and for mechanical cooling — is to provide the very best in customer comfort. This, in turn, can result only from sound engineering techniques.

Engineering of an air conditioning system at Tri-City begins with this rule of thumb: interior temperature should be 80 F at 50 per cent relative humidity. There are so many variables of climate, installation problems and customer preference involved that the ideal must almost always be adjusted to particular circumstances.

In Riverside and nearby San Bernardino, a 25 F temperature drop between outdoors and indoors is considered the maximum. On the desert, not more than 30 F is recommended. Yet the person buying air conditioning is interested in comfort, and home owners may disagree violently with the standards suggested. A woman in Indio had equipment installed to bring the inside temperature down to 76 F, although the outside temperature was running 121 F during the daytime. In this instance the radical variation did not particularly matter, since she spends all her time indoors and would not be subjected to a great change by stepping outside.

As another rough rule of thumb, a ton of refrigeration is judged adequate for between 400 and 600 sq ft in the milder climate. On the desert, the figure drops to between 350 and 400 sq ft, says Mr. Topham. Again customer preference must be taken into consideration as well as orientation of the house and how well it is insulated.

In Riverside the average sized home can usually be cooled by a 2 ton system, he believes. Bedrooms are shut off during the day and opened to the cool night breezes, so the load is carried only during the hottest hours. Combination heating and cooling units priced as low as $1500 have been installed under these conditions, when a simple layout and minimum of ductwork are required.

Equipment Varies with Application

On all but the larger homes, Tom Topham depends almost exclusively on 1 ton package units used in multiple for the installation. He feels that these hermetically sealed refrigeration circuits have been a major factor in the outstanding success he's had with residential air conditioning. They take up only 20×20 in. of floor space and no skilled refrigeration mechanic is necessary. The units are simply set in place and connected up for operation.

In most instances, units are combined with a forced air system, utilizing the same blower for both heating

and cooling. A larger blower is usually required than would be necessary for heating alone, since the mild southern California climate does not necessitate a large heating plant. Dealers there are not handling zero winter temperatures and 95 F summer cooling as is the case in many northern states. Nevertheless, the combination blower makes for greater simplicity and added economy. Mr. Topham also strives to avoid complicated control hook-ups.

The general practice is to place the 1 ton units at a central spot in the home, then mount the warm air furnace above them. Up to four units may be used together. For systems requiring five or more tons of refrigeration, a larger hermetically sealed model is installed.

Use of cooling towers depends upon water rates and the possibility of salvaging water used to cool refrigerant in the condenser. In most communities the water need not go down the sewer, but can be employed for growing lawns and gardens. A three-way valve is hooked up to make this possible, and in most instances home owners save enough on irrigation to practically wipe out the cost of water consumed by the air conditioning system. Where rates are high and lawns few, as on the desert, towers are employed to cool the water by evaporation and conserve as much of it as possible.

Some contractors have used swimming pools for this purpose when there is one available. Tri-City has made such an installation on only one occasion. Mr. Topham points out that the better pools have chlorinated water which is injurious to copper tubing. During extremely hot periods when the air conditioning plant is operating at capacity, the temperature of water in the pool may rise to a point where it's no longer effective for cooling and is too warm for swimming.

How Costs Vary

Air conditioning of existing homes falls into three classifications: installations where the heating plant, cooling system and complete ductwork are provided; installations where a new cooling system is applied to an existing heating installation; and those where completely separate air conditioning equipment is installed, with its own ductwork. Wherever existing ducts are used they are wrapped with either fiber glass or rockwool for additional insulation. Usually ducts have no more than one layer of asbestos wrapping.

In the Riverside area, installations usually are made in homes which range in price from $14,000 to $25,000. Some have also gone into the $10,000 bracket homes — which is more of a general rule on the desert where cooling is a virtual necessity.

Considering the degree of comfort made possible by an adequate air conditioning system, the operating costs are so nominal as to fall within the limits of almost any family budget. Mr. Topham has been observing a test house in Riverside for the past two years, gathering data on just what expense items are involved in the operation of a 3 ton plant. He has discovered that on an average, it costs from $8 to $15 per month depending on weather conditions.

Additional water and electricity run considerably higher on the desert, both because of the rate structure and the fact that cooling units operate 24 hours a day during the summer. It still amounts to only $40 or $45 a month, however, which appears quite reasonable in view of the fact that residents of colder climates are accustomed to similar charges for winter heating.

Installations Have "Snowballing" Effect

For every air conditioning installation made by Tri-City, a couple of good prospects are obtained for future jobs. When a family has a cooling system, friends and neighbors like it so well they want the same thing. "Keeping up with the Jones" also becomes an important consideration. Actually, it takes only a few installations to start a "snowballing" effect that spreads very rapidly.

The company has four salesmen, in addition to Mr. Topham, who estimate and give quotations on new jobs. Engineering is done in the office for greater accuracy and efficiency. Salesmen must have a certain amount of technical knowledge, but they are chosen primarily on the basis of personality and sales ability. Evening work is the rule, since that is the only time both husband and wife can be seen together.

"It's a good idea to concentrate considerable effort on professional men," claims Tom Topham. "Usually such people already have installed air conditioning in their offices. Thus in a way they're pre-sold. It doesn't require much talking to convince them that they should also have air conditioning in their homes, and their wives are invariably quick to see the point. And most doctors and lawyers have contacts with a great many people — which means more new business."

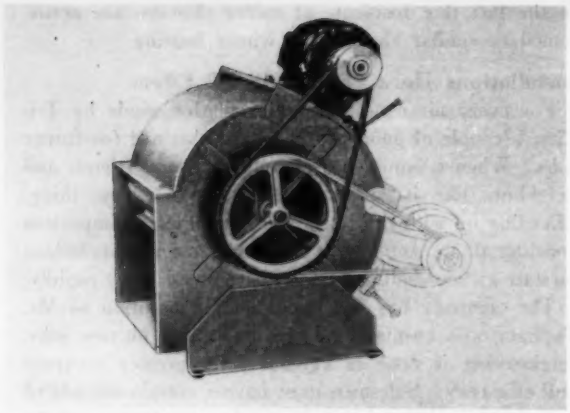
STUDY TEMPERATURE AND HUMIDITY EFFECTS

NEW FACILITIES for research studies on effects of temperature and humidity, including eight special air conditioned rooms, have recently been completed in the research and educational hospital of the University of Illinois, at Chicago. These facilities were described at a recent meeting of the Illinois chapter of the American Society of Heating and Ventilating Engineers. Prof. M. K. Fahnestock, research professor of mechanical engineering and chairman of the ASHVE technical advisory committee on physiological research, gave detailed information on the rooms, which have been designed for precise control of temperature, humidity, air motion and air cleanliness. "In general," he said, "temperatures may be varied from 45 to 120 F and relative humidities may be obtained from 20 to 80 per cent at any dry bulb temperature. The permissible deviation in temperature is ± 0.5 F. The deviation in relative humidity is ± 2 per cent." Professor Fahnestock pointed out that separate air conditioning equipment is provided for each room in order to promote flexibility and to make conditions in each room independent of other rooms.

FOR HEATING . . . FOR COOLING

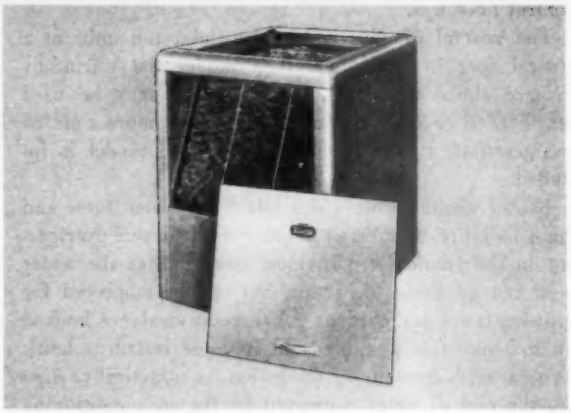
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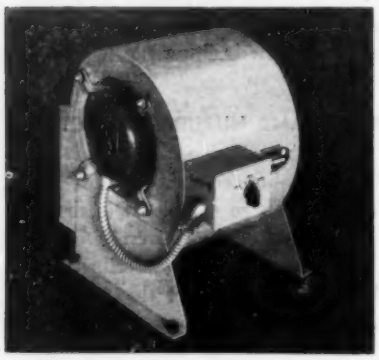
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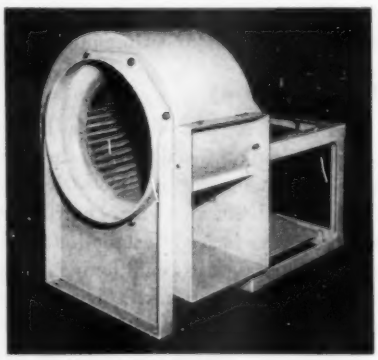
For converting coal, oil or gas gravity furnaces to forced air. Available in five sizes for furnaces ranging from 80,000 to 225,000 BTU rating. Air handling capacities from 650 to 3,200 CFM at $\frac{3}{8}$" static pressure. Quiet running, economical to operate, easy to install. Easy access to filters and blower assembly through removable rear panel of smoothly styled cabinet. Motor has overload protection and resilient mounting. Available in belt and direct-drive models.



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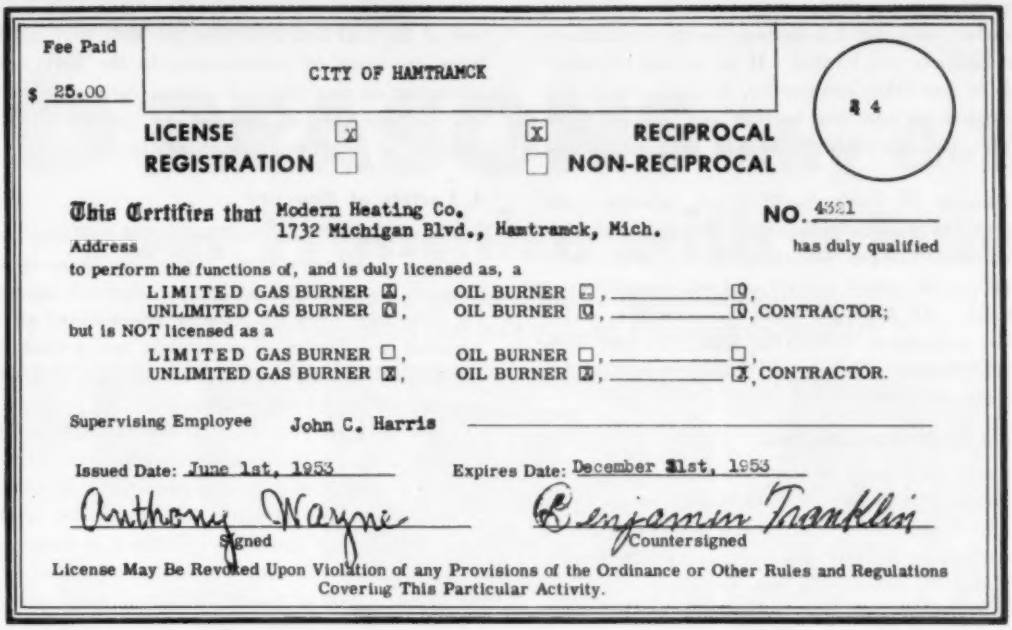
Company.....

City..... State.....

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to perform the functions of, and is duly licensed as, a
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UNLIMITED GAS BURNER [ ], OIL BURNER [ ], _____ [ ], CONTRACTOR;
but is NOT licensed as a
LIMITED GAS BURNER [ ], OIL BURNER [ ], _____ [ ],
UNLIMITED GAS BURNER [X], OIL BURNER [X], _____ [X], CONTRACTOR.

Supervising Employee John C. Harris

Issued Date: June 1st, 1953 Expires Date: December 31st, 1953

Anthony Wayne
Signed

Benjamin Franklin
Countersigned

License May Be Revoked Upon Violation of any Provisions of the Ordinance or Other Rules and Regulations Covering This Particular Activity.

Reciprocal Licensing—a "Test Run"

. . . in Detroit, where heating contractors are finding it saves them time and money. In the cooperating communities, codes have been standardized and sub-standard work eliminated

By N. J. Biddle

Secretary-Treasurer
Michigan Heating and Sheet Metal Association

RECIPROCAL LICENSING should be an issue of paramount importance to every great metropolitan area which is surrounded by a number of smaller political subdivisions, particularly in view of the increasing interest in and spread of local licensing in the heating field.

Reciprocal licensing is an arrangement between several political subdivisions whereby each community agrees, by ordinance, to accept the licensees of other reciprocating communities without the usual prequalification requirements, merely relying upon the certification of the contractor's home community and a proper registration. It must be predicated upon substantially equal qualification and installation requirements in the communities involved.

Heating Plan Follows Precedent

There is always a question as to the practical workability of any new arrangement. While reciprocal licensing is new in the heating industry of metropolitan Detroit, it is not new in the electrical industry of this area. An examination of the workability of the plan in the electrical field, in operation for almost 14 years, should clearly indicate what may be expected in the heating field, since reciprocal licensing in heating follows the pattern in the other industry, except that workmen are not licensed.

For some years prior to 1939, Michigan had a state electrical licensing law which required all electrical contractors to take out a license before they were allowed to undertake any work. Under this act, the contractor who had been in business for a certain time prior to the effective date was allowed a license without examination. All later contractors were required to qualify as to their fitness by examination. A state board of examiners held examinations at various locations in the state periodically. There was a charge for the examination, and the license fee was $25.00.

One of the specific provisions of the law was that the contractor take out his license in the community where his business was located. If he wished to undertake work in any other community, he had to first display his credentials and then register and pay the registration fee. He could then take out permits without delay.

On September 19, 1939, the Michigan supreme court held that this law was discriminatory (because of the exemption of public utilities, mine installations, and certain other large private power plants) and was therefore unconstitutional. As a result, many communities which had license ordinances before the state law had been enacted were dusting off these old ordinances or getting ready to enact new ones.

Reciprocal Ordinance Drafted

Prior to the enactment of the state law, a contractor working in more than one community had to maintain licenses in each, year after year, or else proceed as a new licensee with examinations and waiting periods before being allowed to work. When the state law was declared unconstitutional, it seemed likely that the same situation would again arise, only with a far greater number of communities and higher license fees involved.

This matter was called to the attention of Detroit's building commissioner, Joseph P. Wolff. It was suggested by a group of contractors that, if the registration provisions of the state act could be reinstituted under some reciprocal arrangement between the several communities in this area, it would be of benefit to all the contractors and would effect a considerable saving to the general public. The commissioner then drafted the first reciprocal licensing ordinance, which was approved by the corporation counsel. A meeting of all the surrounding communities was called on October 11, 1939, at which time the idea was presented and a draft of the ordinance or the reciprocal provisions was read, as follows:

"The city of Detroit shall permit electrical contractors lawfully licensed by other municipalities of the state of Michigan to install, alter or repair electrical wiring, equipment, apparatus or fixtures for light, heat or power purposes within the corporate limits of the city of Detroit upon a payment of a nominal registration fee, provided that such municipalities reciprocate in recognizing electrical contractors who are duly licensed under the provisions of this ordinance by granting them the same privilege and charging the same uniform license and registration fees and provided, further, that the licensing ordinances are substantially equal to the requirements of this ordinance. (No registration fee shall be collected in any case where one-half of the license fee is received from another municipality.) The required registration fee shall be $1.00 and shall expire concurrently with the license issued. Journeyman electricians duly licensed by any municipality cooperating in the reciprocal arrangement shall be permitted to work in the city of Detroit without the payment of a registration fee.

"No electrical contractors' licenses shall be recognized for the purpose of registration, by the city of Detroit, of applicants who maintain their principal place of business in a municipality which fails to approve, by affirmative action of it legislative body, the reciprocal and mutually interchangeable licensing arrangements covered by this ordinance. All license fees collected from such persons, firms or corporations shall be retained by the municipality issuing the licenses."

Detroit adopted the ordinance on November 24, 1939, with four more communities following suit before the end of the year and 26 during the next year, until today there are some 62 communities in the area which are operating on this plan. It seems likely that the spread will continue until all cities, towns, and townships within a radius of 50 miles or more will be included.

A Variety of Benefits

For the contractor, this reciprocal licensing plan has provided many advantages. Only one license is required to work in any or all of these reciprocal communities. To undertake work in another community, all that is required is a display of credentials, and permits may be taken out immediately after registration and the payment of a nominal registration fee.

The contractor can move freely throughout the area without regard to political subdivision boundaries. No waiting period is required. Registrations do not have to be maintained year after year in communities in which no work is currently available. Without reciprocal licensing it was necessary for the contractor either to renew his license yearly or proceed as a new applicant contractor with a considerable waiting period between application and the granting of a license.

Since reciprocal licensing is an area proposition which requires periodic consulations between the several administrative and enforcement agencies and other affected agencies it results in an increasing degree of uniformity of rules and interpretations, which is of great benefit to the contractor. Prior to reciprocal licensing, contractors were plagued with many conflicting rules and interpretations of the different enforcing agencies. What was acceptable in one community was frowned on by another. Wholesalers and manufacturers had to supply a number of different types of materials to do the same job. Expensive call-backs were caused by local rulings which had no sound basis for inclusion in the codes. This has all been eliminated in the Detroit area.

Sub-Standard Work Eliminated

Some contractors are slow in repairing violations, particularly when working in communities other than their own. Inducing some of these contractors to repair their violations always was a difficult task for inspection authorities. Under reciprocal licensing, this ceases to be a problem. There has been established a central clearing house where unrepaired violations are reported after a certain lapse of time. Notice of such listing to the violator has resulted to date in all such violations being repaired quickly.

Through the years there have been contractors who did sub-standard work in one community until they could no longer secure a license, and then moved to another community to work. This has ceased under the central clearing house plan. All applicants are cleared through this agency, and a contractor with a bad record has a difficult time getting a license in another community.

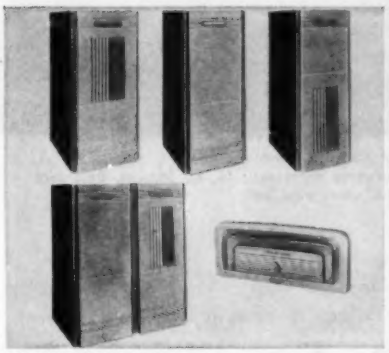
The uniformity, understanding and progress which

(*Please turn to page* 150)

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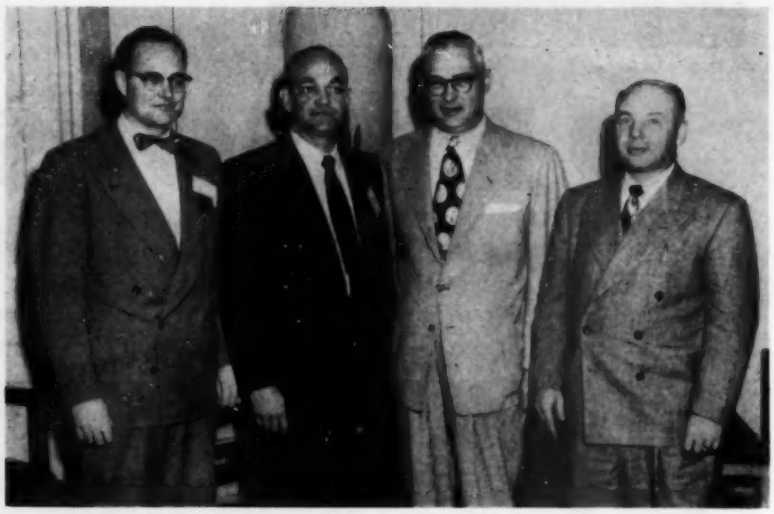
Company .....

Address .....

City ..... County ..... State .....



NEW PRESIDENT Wm. H. Bowe, Jr., *(left)* commends retiring president Geo. F. Wheelock for the association's 1953 achievements



OTHER NEW OFFICERS for the coming year include *(l. to r.)* R. A. Swart, treasurer; Stuart Rambo, executive secretary; G. C. Mason, first vice president; and G. A. Ashburn, second vice president

Heating Wholesalers Told "Cooling Is Good Business"

. . . at the recent NHWA convention. They also heard about proposed FTC trade practice rules, and got tips on warehousing and training salesmen and dealers

BUSINESS PROSPECTS for 1954 and the maintenance of good business ethics among heating wholesalers were the themes of the National Heating Wholesalers Association annual convention, held in Chicago on December 8 and 9.

New officers elected at the meeting are Wm. H. Bowe, Jr., president; Gail C. Mason, first vice president; Glenn A. Ashburn, second vice president; Robert H. Swart, treasurer; and A. G. Earnshaw, secretary. C. Stuart Rambo remains executive secretary.

Trustees appointed are Jack B. Allen, A. E. Bennett, Chas. R. Bennett, Oscar P. Brauer, Lee Fields, Lewis A. Heaven, W. P. Irwin, I. E. Jacobs, Francis W. Kerscher, R. P. Laib, A. B. Lewis, C. Blaine Lytle, R. P. May, John J. Moran, E. D. Mott, Ray L. Payne, J. P. Speck, L. A. Stump, A. L. Thys, and E. D. Williams.

Cooling Is Good Business

The consensus was that the heating wholesaler could expect a greater volume in business during 1954—chiefly because of the demand for packaged residential cooling equipment. This was emphasized by Wm. L. Dulle, vice president of E. E. Souther Iron Co., who told about the experiences of his company in handling this type of merchandise. Mr. Dulle said that in 1951, when his company first considered stocking residential cooling equipment, it sought a method that had been tried and proved successful but was unable to find anyone with a comparable operation that would fit its need.

After much consideration, it was decided that the



AMONG THE WHOLESALERS and their wives who attended the banquet were *(l. to r.)* Mr. and Mrs. J. E. Diment and Mr. and Mrs. Jack Allen



DISCUSSING HIS SPEECH, Wm. L. Dulle *(left)* explains to W. J. Silberman some of the points he made on merchandising summer cooling equipment

company could only gain the experience needed by purchasing the equipment at dealers' cost and working with dealers to gain the necessary information to see how a wholesaler would fit his established business into the summer cooling picture.

Engineering and installation information was furnished free to dealers by the engineering department, which handles the training of dealers and their staffs. At the end of 1952 a plan of dealer training in summer cooling merchandising and servicing was designed and in 1953 was used as a basis for obtaining more information so that the program could be enlarged early in 1954. This type of assistance to dealers has been responsible for increasing the 1952 sales volume by 1050 per cent in 1953.

The value of handling this type of equipment is readily understandable, Mr. Dulle said, pointing out that the dollar volume obtained from a $1000 air conditioning unit (occupying about 7 sq ft) turned over only two times annually is greater per sq ft than from a $200 furnace (occupying 4 sq ft) moved four times a year. This assumes, of course, that the per cent of markup is the same for both pieces of merchandise. Mr. Dulle said that the company for which he works used the same pricing arrangement for both cooling and heating equipment.

Dealer Training a Must

One of the facts learned by the wholesaling company is that dealers needed to be trained to sell summer cooling. Mr. Dulle recommended that an intensive dealer program be carried out by the wholesaler with the help of the manufacturer he represents. The use of the manufacturer's marketing data is an essential part of any sales training program, since it aids the dealer to obtain local customer acceptance of a nationally advertised product.

Another point uncovered by Mr. Dulle's company was that the dealer who sold *comfort* rather than equipment met with greater success in his merchandising campaign. Training dealers and their staffs in engineering procedures for selecting equipment and air distribution is as important a part of the wholesaling operation as is the training of service men for maintaining the equipment, it was found.

Mr. Dulle recommended that a check test be conducted on every installation by the dealer who makes the sale before he turns the air conditioner over to the customer as ready for use. This recommendation was based upon findings that the auxiliary service trades—electrician, plumber or refrigeration mechanics—had failed to follow installation instructions or had installed equipment of incorrect capacity at the time of original installation. Forty-five per cent of the service calls during the first season were found to be due to the failure to conduct a final test run.

How Cooling Affects Wholesale Organization

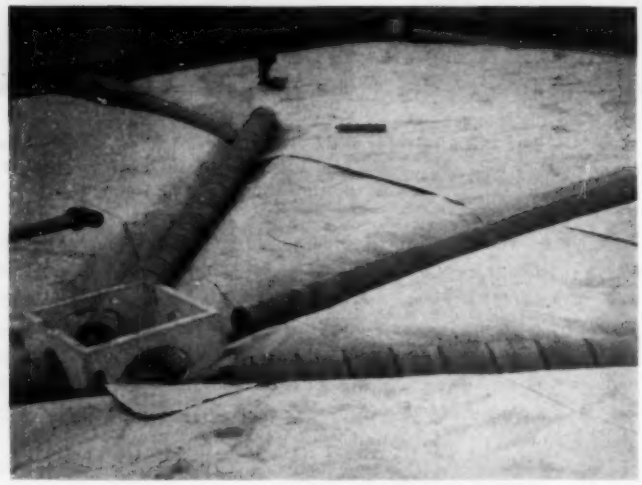
In commenting upon the business aspect of operating a wholesaling organization in which both heating and cooling units are handled, Mr. Dulle said that his company had handled a larger dollar volume in 1953 than in 1952 with only one man added to its 1952 staff of 34 people. The company found that the peaks and valleys of a business graph were smoothed out with the addition of a summer cooling line. No extra load was added to the engineering staff, since it had been customary for the engineering department to help in other departments during the lull before the busy heating season, and this period was found to be the one in which summer cooling installations were most actively considered. The one employee added to the staff was

(Please turn to page 158)

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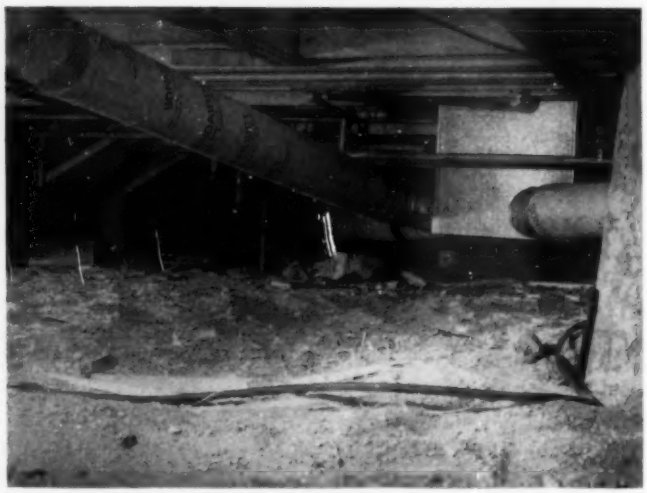
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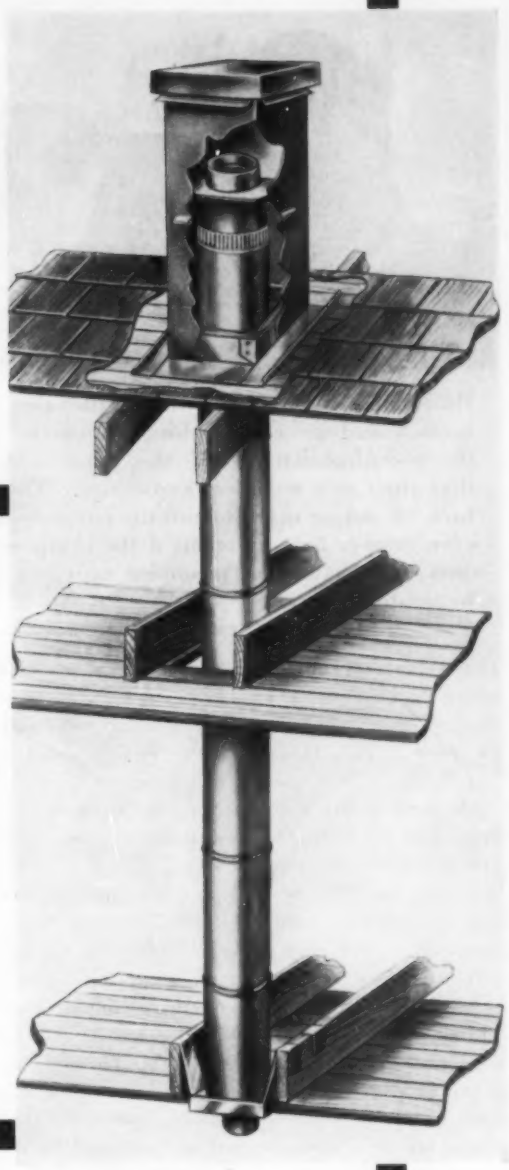
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Dealer Pays for Misrepresentations

By Albert W. Gray



Most home owners base their purchases of heating and air conditioning equipment on the recommendations of the seller rather than their own technical knowledge. Therefore, the buyer may discontinue payments or even recover past payments if the equipment does not perform as promised expressly or by implied warranty

THE SALESMAN for an air conditioning manufacturer assured a purchaser (who knew nothing of what size or type of air conditioning unit would be suitable to his needs) that the equipment recommended would "air condition" the purchaser's premises.

The unit functioned satisfactorily for three or four weeks and the purchaser bought the equipment, paying part of the price in cash and giving notes for the balance. However, the efficiency of the unit declined with the heat of summer, until the unit failed to reduce the temperature more than 4 or 5 F below the outside temperature.

After several ineffectual efforts had been made by the seller to remedy the defects, the purchaser asked the seller to remove the equipment. This the seller refused to do and sued for the amount of the notes. In his defense, the purchaser maintained that there had been a total failure of consideration and repeated his offer to return the equipment.

The court held the seller was not entitled to recover, since the equipment had failed to operate as it had been represented. This the court supplemented with:

"If the modern conveniences now constantly coming into use are to be purchased with any degree of safety and devoted to practicable use, the public must of necessity rely upon expert knowledge and assurances of sellers in many instances as to their suitability for the purpose intended. When such reliance is known to the seller, the assurances and representations should be made good when they have brought about the sale."

Can't Collect Damages on Void Contract

In the first instance, the purchaser waived any claim he might have had to a refund of the money paid on account. This was not the case in another transaction involving a suit against a purchaser on a note he had given in the purchase of an air conditioning unit. The purchaser not only denied the seller's right to recover (claiming the contract to be void), but set up as a counterclaim not only the amount already paid under the contract but substantial damages for breach of contract.

In that instance, the court held that the purchaser might be entitled to a rescission of the contract or to damages, but not to both.

"The defense of damages," said the court, "is inconsistent with the purchaser's denial of the seller's right of action. The purchaser cannot be heard to deny the existence of the contract and at the same time claim damages in reduction of the amount arising out of the transaction on which the suit is based."

Court May Reduce Contract Price

The mere fact that the customer has retained defective equipment and continued to use it after notifying the dealer of the defects does not for that reason compel the purchaser to pay the full contract price. The representations of the seller may be made good by the installation of the air conditioning unit agreed upon, but they also may be made good in the reduction by the court of the amount recoverable under the contract.

A lawsuit was brought by a seller to recover the unpaid balance of a note given by a purchaser who contended in his defense that the equipment was to be delivered and installed and was to be reasonably fit and proper for the purpose intended, as a consideration for the note.

This unit, the purchaser contended, was defective and insufficient for the purpose for which it was bought.

Albert W. Gray, author of this article, has had 20 years' experience as an attorney in the courts of New York City. He has written widely on legal matters and is the author of "The Family Legal Adviser."



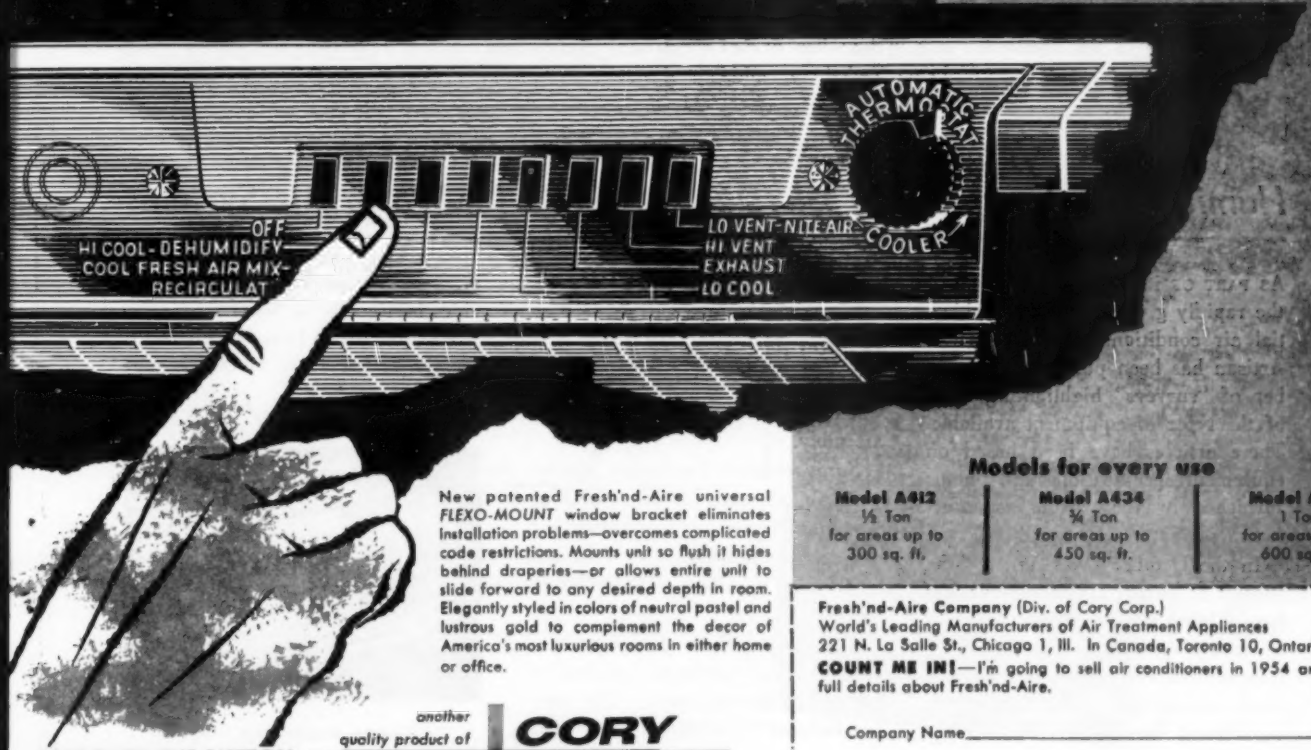
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and the payments already made amounted to more than it was reasonably worth. As a consequence nothing was due on the note. In its decision in favor of the purchaser, the court followed as authority an earlier case in which it had been held:

"There is always an implied warranty, in the absence of an express warranty to the same effect not inconsistent therewith, that an article sold for a special purpose be suitable for such purpose. Thus, in the case of an implied contract, the purchaser is not bound to return the property in case the machine fails to work. The effect of a failure to return or offer to return is that if the machine is of value for any purpose or may be repaired, the defense avails only as a partial failure of consideration and partial reduction of the purchase price."

Following this decision, the court said (in sustaining the buyer's contention that an adequate price had already been paid for the equipment):

"The purchaser may, after discovery of defects in an article sold under a warranty either express or implied, retain the article and defeat a recovery of the purchase price to the extent of the difference between the value as represented and its real value."

Buyer Can Recover Payments

The courts have held under this rule that where air conditioning or heating equipment has been purchased and payments made on the basis of misrepresentations of the seller, the buyer is entitled to a recovery of the payments he has made.

A contract provided that a furnace was to maintain a specific temperature. Six months after this furnace was installed the purchaser wrote, "As I have advised you many times over the telephone, this system has never started without your mechanic being called in, and within an hour after he leaves, it stops. Even with him here, the system has never yet heated the house uniformly or comfortably."

The buyer had paid $900 on the purchase price and the contractor sued for an unpaid balance of $350. In his defense, the customer asked for a refund of the money already paid on the grounds that the equipment was "utterly worthless for the use for which it was intended."

Deciding in favor of the purchaser and awarding him a judgment for the amount he had paid, the court said:

"The heating system as installed did not comply with its contract guarantee and certainly was so imperfect that its defects, if known to the buyer, would have prevented its purchase."

The Seller Must Make Good

In the suit mentioned at the beginning of this article, brought to recover the unpaid balance for the equipment which the salesman had assured the buyer would "air condition" his premises, the court followed as authority a decision which was a summary of this law governing the responsibility of dealers and contractors for representations on which the buyer is justified in depending.

"Where goods are purchased on material representations of the seller and not upon the purchaser's own judgment, and the representations are false and induce the purchaser to make the bargain, the contract cannot stand regardless of whether the seller has actual fraudulent intent or not.

"Putting it differently, if the seller makes material representations of fact without knowing whether they are true or false, this is fraud in law and the seller must make his statements good."

[Note: While this discussion applies to actual cases, it should be remembered that legal rules vary in different states.]

Humidifying Equipment . . . . . for Warm Air Systems

AS PART OF its editorial coverage of the rapidly growing field of residential air conditioning, the American Artisan has been publishing a number of "surveys" highlighting some of the types of equipment available. These articles have been based on equipment specifications and photos furnished by the various manufacturers.

In the October 1953 Artisan, the subject of this group of surveys was humidifying equipment for use with warm air systems. The following information on a humidifier has been made available to the Artisan to supplement the October material.

Spray Type Humidifiers

Century

Method of obtaining spray: City water pressure and special spray assembly.

Spray control: Stationary nozzles.

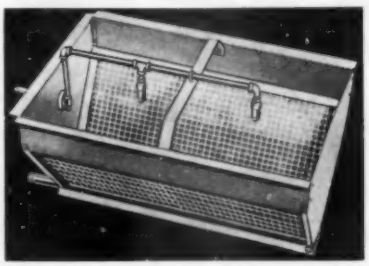
Angle of spray: Downward.

Humidity control: Controller governed by humidistat.

Average installation time: 1 to 3 hours.

Recommendations for installing: Designed for basement locations of forced air systems only. For existing furnace installations, return side of system generally used; also provides best access to filters.

Manufacturer: Century Engineering Corp., 401 Third St. S.E., Cedar Rapids, Iowa.



Century Engineering Corp.

Specify

Nationally Advertised

DETROIT CONTROLS

Known to Millions of
Your Best Heating Prospects
Through the Powerful Pages of
BETTER HOMES & GARDENS and TIME

Yes, your best heating prospects—*over 5 million of them*—are reading regularly about dependable, economical **DETROIT** Heating Controls in two of America's top advertising mediums—Better Homes & Gardens and Time! These are people who have the means to buy and who know, look for and buy better things. That's why they'll want **DETROIT** Controls. And that's why you can step up your sales and profits by stocking **DETROIT** Controls. Remember, only **DETROIT** gives you the exclusive *Timed Cycling* thermostat—the "thermostat with a brain" that controls temperature to a fraction of a degree, eliminating over and under heating. So why not cash in on this overwhelming product superiority and the powerful advertising support that goes with it? Always be sure to ask for **DETROIT** Controls!

If you're not already familiar with the **DETROIT** *Timed Cycling* Thermostat write today for Form No. 1545-A.

DETROIT-Controls CORP.

5900 TRUMBULL AVE. • DETROIT 8, MICHIGAN
Division of American Radiator & Standard Sanitary Corporation





FOR SOLID COMFORT
Plus SOLID SAVINGS
Plan to Have
DETROIT HEATING CONTROLS

Positive Protection Against Wasteful over and under Heating!

Right now, while you're planning that future castle, is the time to make sure of season after season of convenient, care-free heating comfort. Have your architect, builder or heating contractor select a heating unit equipped with dependable, economical **DETROIT** Controls. For only **DETROIT** gives you the exclusive "thermostat with a brain"—the built-in device that "thinks" ahead, senses temperature changes long before you can, and keeps room temperature just right for health, comfort and fuel economy. Remember, the finest heating equipment can be no better than its automatic controls, so get the best—insist on **DETROIT** Controls.

ESTABLISHED IN 1877 AS DETROIT LUBRICATOR COMPANY

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DETROIT 8, MICHIGAN
Division of American Radiator & Standard Sanitary Corporation

Canadian Representatives in Montreal, Toronto, Winnipeg —Railway & Engineering Specialties, Ltd.

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AVIATION • TRANSPORTATION • HOME APPLIANCES • INDUSTRIAL USES
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AIR CONDITIONING AND REFRIGERATION EQUIPMENT

This complete line of CURTIS equipment assures highest possible efficiency, dependability and quality... at a price that is profitable for you.

Not only will you be equipped to handle any installation but you will be selling equipment that is accepted the world over, and that is proven by 100 years of successful manufacturing experience.

To help you sell more CURTIS Air Conditioning and Refrigeration equipment, it is nationally advertised in *Saturday Evening Post, Time* and *Newsweek*, plus many other national magazines.

For immediate information on how to make your operation more profitable, mail this coupon for details of how you may secure a direct factory franchise:

CM-773

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1982 Kienlen Avenue, St. Louis 20, Missouri

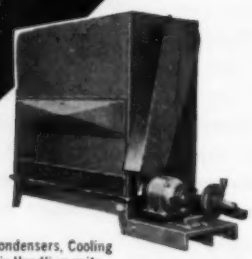
I am interested in direct factory franchise. Send complete details.

Company Name.....

Street.....

City.....Zone....State.....

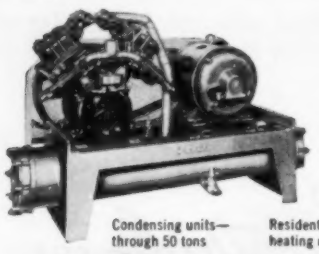
Signed.....



Evaporative Condensers, Cooling Towers and Air Handling units to match



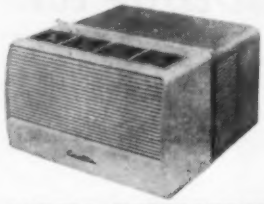
Packaged Air Conditioners—2, 3, 5, 7½, 10 and 15 tons



Condensing units—through 50 tons



Residential cooling and heating units



New 1954 Curtis Room Air Conditioner in three popular sizes.

CURTIS REFRIGERATING MACHINE DIVISION
1982 Kienlen Ave. — St. Louis 20, Mo.

DELTA-DESIGNED

AUTOMATIC D HEATING

EXCLUSIVELY FOR YOU IN '54!

ONLY DELTA MAKES ALL THREE..

1. **The only DIRECT-FIRED OIL UNIT HEATER, which is making the heating industry stand up and take notice.**
2. **The *only* shallow SUSPENDED-HORIZONTAL FURNACE, whose popularity increases month by month.**
3. **The *new* GUN-TYPE FLOOR-O-LEVEL FURNACE, which made heating history the day it was introduced.**

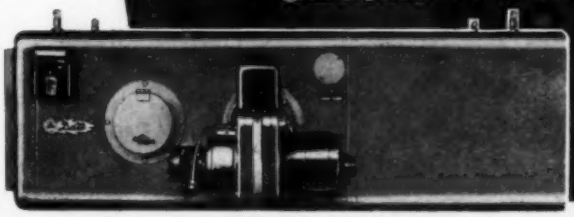
By selling DELTA, YOU can beat all your competition with this profit-packed trio of fine heating equipment made exclusively and only by DELTA.



Delta DIRECT-FIRED OIL UNIT HEATER*

Brand new... the one ideal low-cost heating system for industry! Fired with a gun-type burner, this unit is perfect for locations requiring high velocity air delivery (factories, warehouses, commercial buildings). No costly, unsightly boilers, chimneys, traps or pumps needed. Factory wired and assembled for quick, easy, low-cost installation. Heat is directed only where it's needed. Burner uses inexpensive #2 fuel oil for a 220,000 BTU/hr output. Effective air throw distance is 50 to 75 feet. Suspends overhead or mounts on dolly for portable spot heating.

Delta SUSPENDED-HORIZONTAL FURNACE

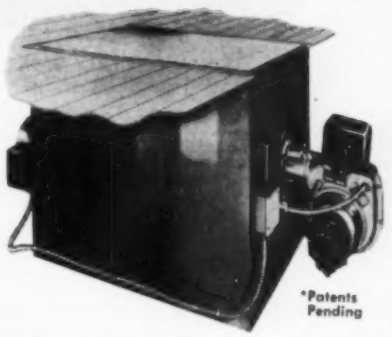


The "small space" furnace that does a "big" heating job. Only 20" from top to bottom... painstakingly designed to fit especially narrow crawl spaces and attics. Larger models are for commercial use. All models use sirocco blowers for duct-type installations. The four Delta furnaces have heat outputs ranging from 80,000 to 210,000 BTU/hr. This furnace's size and power make it efficient and economical for homes and many industrial applications, offices and partitioned spaces, restaurants, stores, gas stations, and many more.

Delta GUN-TYPE FLOOR-O-LEVEL® FURNACE*

This unique Direct-Fired oil Floor Furnace is perfect for homeowners who want more than space heating and yet can't afford expensive installations. A perfect central heating system for the small, cellarless homes being built today.

Priced to compete with kerosene-burning furnaces – it's fired with the powerful (80,000 BTU) automatic gun-type burner you and your servicemen know and understand. A necessity in every heating contractor's line!



*Patents Pending

Send for FREE colorful brochure on the complete Delta Line of Heating Products

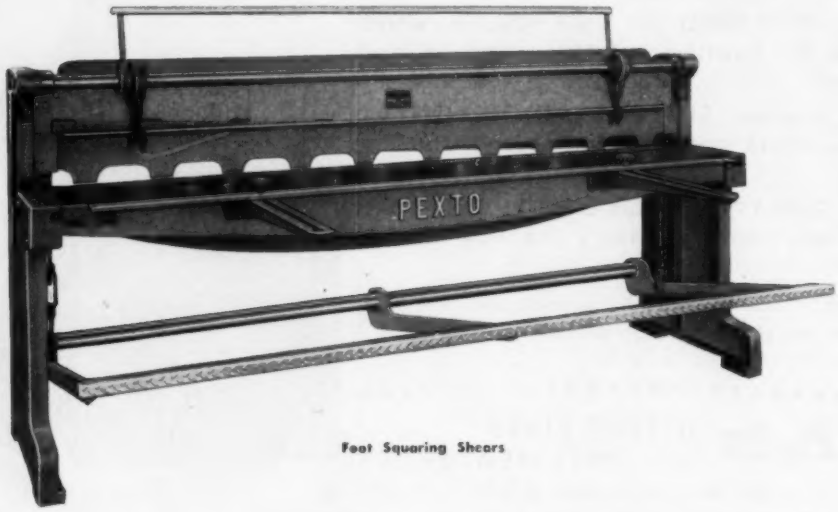
DELTA HEATING CORPORATION • TRENTON 8, N. J. In Canada – Kresno-Stamm, Montreal 24, Canada

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SHEET METAL WORKING EQUIPMENT FOR EVERY JOB

SOME OF THE MANY MACHINES AND TOOLS IN THE COMPLETE PEXTO LINE



Foot Squaring Shears



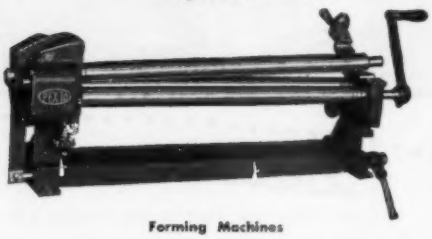
Furnace Collar Edging Machines



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1PX53R

MODEL 450 REMINGTON STUD DRIVER





Simplifies construction fastening in new medical center

Contractors use ten Stud Drivers for fastening in steel and concrete

Contractors for University of Minnesota's new Mayo Memorial Medical Center gave the Remington Stud Driver a real workout. They used 10 of these powerful tools to install ventilating ductwork and to anchor 2,500 metal door bucks to concrete. Door bucks were set separately, walls finished later. This meant plenty of open space for moving in equipment and other material.

For fastening 900 window frames, Remington Stud Drivers again proved fast and convenient. Workmen found the rugged 5½-lb. tools easy to handle, simple to operate. They liked the fact that there were no wires or hose to get in the way as they worked from frame to frame. And every stud was driven arrow-straight—thanks to the precision power supplied by 32 caliber cartridges.

Can the Stud Driver help you?

Your local distributor will be glad to show you the Remington Stud Driver in action—on concrete, brick or steel. Find out how *you* can cut construction costs and speed fastening jobs. For the name of the distributor nearest you and for full information about this modern fastening system, send in the coupon below.

MAIL THIS COUPON TODAY



Industrial Sales Division, Dept. A.A.-1
Remington Arms Company, Inc.
939 Barnum Ave., Bridgeport 2, Connecticut

Please send me *free* copies of the new booklets showing how I can cut my fastening costs — and the name of the distributor nearest me.

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*Position*_____

*Firm*_____

*Address*_____

*City*_____ *State*_____

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Remington DU PONT

Listed & Approved by Underwriters' Laboratories, Inc.

REPAIR PARTS

FOR ALL

FURNACES, BOILERS

AND

OTHER HEATING UNITS

BRAUER REPAIR PARTS
STOVE FURNACE BOILER
OIL STOVE RANGE

WE SPECIALIZE IN GENUINE REPAIRS

THE COMPLETE HEATING SUPPLY HOUSE

OFFERING ALL APPROVED BRANDS OF

ATTIC FANS	FILTERS	REGISTERS
BOILER CEMENTS	FURNACE CEMENT	ROOF COATINGS
BLOWERS	FURNACE PIPE	SMALL TOOLS
CLEANERS	FURNACES, ALL FUELS	STOKERS
CONTROLS	GAS BURNERS	UNIT HEATERS
CONVERSION BURNERS	HUMIDIFIERS	VENTILATORS
DAMPERS	METAL SCREWS	WATER COILS
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OUR INSULATION DIVISION

can supply insulation for all needs

BRAUER INSULATING PRODUCTS

ASBESTOS		Insulation for	
Millboard	Tape	Ducts	Refrigerators
Paper	Cements	Buildings	Boilers
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PHILIP CAREY ASBESTOS PRODUCTS

"FIBERGLAS" "KAYLO" & "ULTRALITE"

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2100 WASHINGTON AVE. ST. LOUIS 3, MO.

MOST IMPORTANT

air diffusion development

OF 1954

NEW

HIGH EFFICIENCY MODEL

TITUS



A NEW CONCEPT IN ROOM AIR DIFFUSION

Here is the world's first diffuser to actually control, direct and diffuse an air stream . . . so efficiently . . . it holds floor to ceiling temperature differential to the minimum. This amazing performance can be maintained summer and winter with both cooled or heated air.

Such efficiency is made possible only by the exclusive TITUS AIR-CONTROL DESIGNED DEVELOPMENTS.

EXTREMELY LARGE FREE AREA

Lowers pressure requirements. Makes it simple to handle either cooled or warm air. Cool air can easily be forced high up the wall. At the same time, maintains maximum low volume spread for heating season. Noise is kept at an absolute minimum.

BAFFLES REALLY CONTROL THE AIR

Stop draft and wall chill by directing air over entire outside wall. Control surfaces lower pressure requirements through smooth distribution; at the same time blanket walls with a coating of air in a high efficiency performance completely beyond the capabilities of other type baseboard registers.

BRILLIANT NEW STYLING

Blends perfectly with room contours. Ideal for remodeling. Used on exposed walls or under large window areas. Performs better than conventional outlets when installed on inside walls as well.

AMAZINGLY LOW INSTALLATION COST

One trip to the job puts these diffusers in. No call-backs, no roughing in. More complete factory assembly speeds installation. No metal cutting necessary.

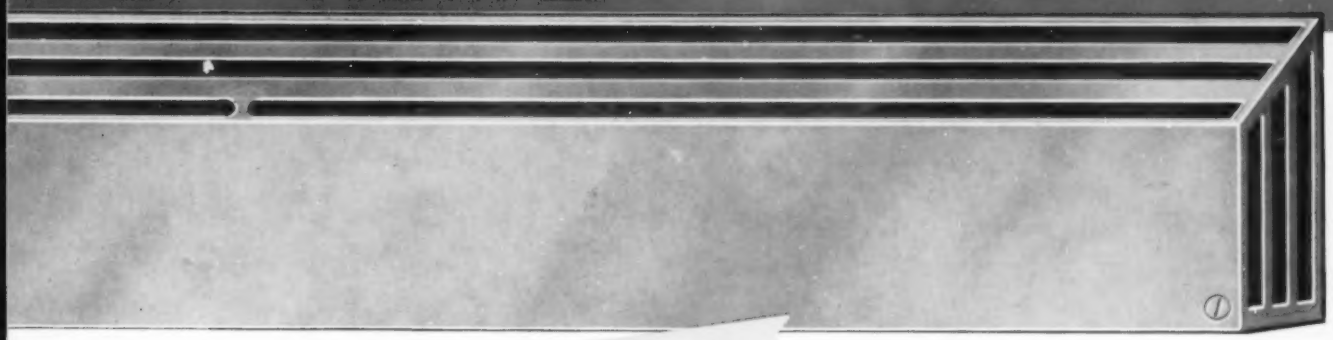
Made of heavy duty steel to take floor level use and abuse.

Write today for free new catalog giving facts on this most amazing air diffusion development.

SPECIFICATIONS

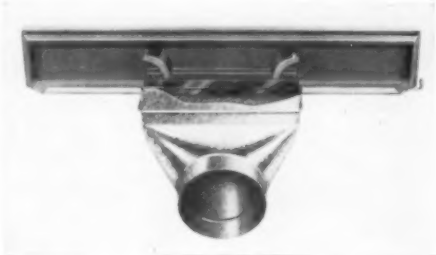
Model No.	Open Size	Width	Height	Depth	Free Area	Approx. Ship. Wt.
50	2¼″ x 12″	17″	4″	2¼″	19″	2 lbs.
100	2¼″ x 12″	30″	4″	2¼″	33″	3½ lbs.
150	2-2¼″ x 12″	60″	4″	2¼″	62″	7 lbs.

PERIMETER DIFFUSER

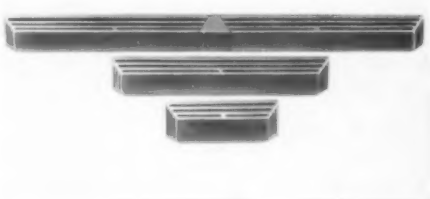


AT AN UNBEATABLE LOW PRICE—

LARGE DEMAND AND NEW METHODS OF MANUFACTURE HAVE MADE POSSIBLE THESE NEW LOW PRICES







BAFFLES GIVE 180° DIFFUSION

Eliminate turbulence. Blanket wall with warm or cool air. So ingeniously designed they actually require less C. F. M. Direct cool air to higher room levels. Eliminate low level stratification and stagnation areas. Make possible an improved low volume spread for heating.

LESS PARTS—MORE COMPLETE FACTORY ASSEMBLY

Back, sides and top are welded together for extra strength. Simplify installation. Two screws fasten diffuser to studding. Front plate attaches with another two screws. Slips easily onto boot. No cutting of metal required for boot. Recesses into baseboard.

CHOICE OF 3 MODELS

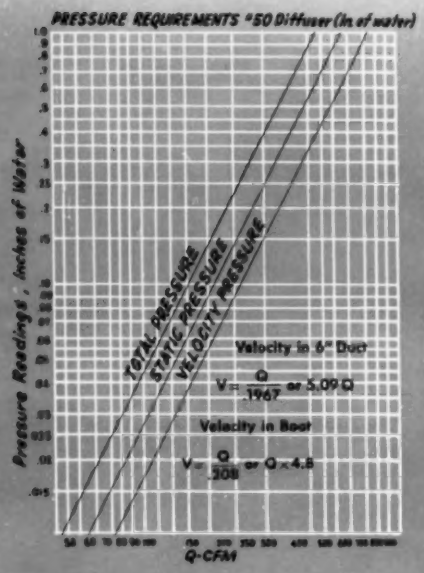
No. 50—17″ length for use in bathrooms or areas not requiring large volume air delivery where space is small.

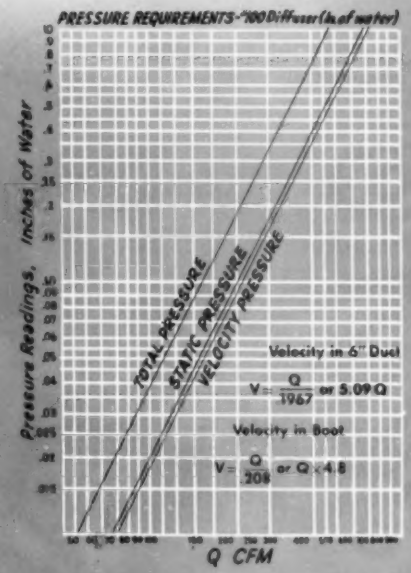
No. 100—30″ length. For normal size rooms where it provides greater air volume in broad diffusion pattern for blanketing exposed wall.

No. 150—60″ length. Consists of two No. 100 diffusers joined with clip for coverage of large walled area with extreme air volume. Used primarily in commercial installations or for large window areas.

performance and engineering data

To obtain pressure requirements at a given C.F.M. read along the bottom horizontal scale to correct volume delivery, then up corresponding vertical line to the desired pressure diagonal. Pressure and inches of water may then be obtained from the vertical scale along the left hand border.





No. 50 DIFFUSER

CFM	Static Press	Velocity Press	Total Press	Aver. Face Velocity	Heating Register Temperature 120° B.T.U.	Heating Register Temperature 135° B.T.U.	Heating Register Temperature 150° B.T.U.	Cooling Temp. Differential 15° B.T.U.	Cooling Temp. Differential 20° B.T.U.
60	.010	.006	.016	454	3240	4210	5195	970	1295
65	.012	.007	.019	492	3515	4565	5615	1050	1400
70	.014	.009	.023	530	3780	4920	6050	1130	1505
75	.016	.010	.026	568	4050	5270	6490	1210	1610
80	.018	.011	.029	606	4320	5615	6910	1290	1715
85	.020	.013	.033	643	4595	5975	7350	1370	1820
90	.023	.014	.037	681	4860	6310	7790	1450	1925
95	.026	.016	.042	719	5130	6675	8210	1530	2030
100	.028	.018	.046	757	5400	7030	8645	1610	2135
105	.031	.020	.051	795	5670	7390	9080	1690	2240
110	.034	.021	.055	834	5945	7740	9510	1770	2345
115	.037	.024	.061	871	6210	8090	9950	1850	2450
120	.041	.026	.067	909	6485	8440	10,380	1930	2555
125	.044	.028	.072	947	6750	8790	10,800	2010	2660
130	.048	.031	.079	985	7025	9140	11,220	2090	2765
135	.052	.032	.084	1020	7300	9490	11,680	2170	2870
140	.056	.035	.091	1060	7560	9840	12,100	2250	2975
145	.059	.037	.096	1100	7840	10,200	12,530	2330	3080
150	.064	.040	.104	1135	8100	10,520	12,950	2410	3185

All figures are corrected to standard air density .075 lbs. per cu. ft. B.T.U. figures are based on a 70° return air for heating and 75° return air for cooling.

No. 100 DIFFUSER

CFM	Static Press	Velocity Press	Total Press	Aver. Face Velocity	Heating Register Temperature 120° B.T.U.	Heating Register Temperature 135° B.T.U.	Heating Register Temperature 150° B.T.U.	Cooling Temp. Differential 15° B.T.U.	Cooling Temp. Differential 20° B.T.U.
90	.015	.015	.030	392	4860	6310	7790	1450	1925
95	.017	.016	.033	415	5130	6675	8210	1530	2030
100	.019	.018	.037	436	5400	7030	8645	1610	2135
105	.021	.020	.041	458	5670	7390	9080	1690	2240
110	.023	.022	.045	480	5945	7740	9510	1770	2345
115	.025	.024	.049	502	6210	8090	9950	1850	2450
120	.027	.026	.053	523	6485	8440	10,380	1930	2555
125	.030	.028	.058	545	6750	8790	10,800	2010	2660
130	.032	.030	.062	566	7025	9140	11,220	2090	2765
135	.035	.033	.068	589	7300	9490	11,680	2170	2870
140	.037	.035	.072	610	7560	9840	12,100	2250	2975
145	.040	.037	.077	632	7840	10,200	12,530	2330	3080
150	.043	.040	.083	654	8100	10,520	12,950	2410	3185
155	.046	.043	.089	676	8370	10,900	13,400	2490	3290
160	.049	.046	.095	698	8650	11,230	13,820	2570	3395
165	.052	.048	.100	719	8910	11,600	14,280	2650	3500
170	.055	.052	.107	741	9190	11,950	14,700	2730	3605
175	.058	.055	.113	763	9450	12,300	15,130	2810	3710
180	.062	.058	.120	785	9710	12,650	15,550	2890	3815

All figures are corrected to standard air density .075 lbs. per cu. ft. B.T.U. figures are based on a 70° return air for heating and 75° return air for cooling.

WRITE FOR

NEW FREE 1954 CATALOG



TITUS, INC. WATERLOO, IOWA

NWAHACA CONVENES —

(*Continued from page* 103)

favorable position. We have cooling as well as heating comfort to sell."

Must Sell Comfort to Public

The modernization market came in for even greater attention when H. C. Gurney, sales manager, Janitrol Div., Surface Combustion Corp., and chairman of the association's publicity and merchandising committee, spoke on the use of publicity and its relation to the market. Mr. Gurney said, "During the past few years, a great deal of the committee's effort has been focused on the new house market. Realizing that the replacement market is of equal importance, and having secured substantial recognition in the new house field, we have this year stepped up our publicity to the home modernization market.

"Each month we have sent out a specially prepared publicity release for the dealers' use. Clippings from newspapers across the country demonstrate that these releases are being used by more and more dealers. As a result of the activities of the association's staff, 1953 has been our best year from the standpoint of newspaper space.

"The basic problem today is to let the public know the degree of comfort they can have—and should expect—from a good heating and air conditioning system," he said. "The importance and values of good heating and air conditioning can and must be dramatized to the public to create an appreciation and desire which at least equals the desire for intensively promoted glamour gadgets.

"Do you mean to tell me that the difference between a good comfort system and an inferior system isn't worth the $187 people pay for an automatic transmission on an automobile?" he asked. "Yet for an extra $187 many people could have had a much better system than the one they bought—or found in the new house they bought. Is a big screen television set really more important than a good comfort system? Millions of people have tossed out their small sets and spent 2, 3, or 400 dollars for a big screen set. And they will do the same thing when color television hits."

Mr. Gurney pointed out that there are 4½ million homes in this country which have warm air systems more than 10 years old—most of them fit subjects for replacement with modern comfort systems. He also stressed that 7 million gravity systems are in use—all modernization possibilities if the industry can give the public an understanding of what it is missing. There are also 20 million homes without any kind of central heating. All of this market—in addition to the new house market—should be tapped by the warm air industry, he said.

Mr. Gurney continued, "The educational and mass selling job is too big for the manufacturers and dealers to do individually—just as any research job is too big to tackle alone. It calls for combined industry action. Our industry has worked for what it could get. It's been good, but could be better. We are competing with other industries which spend millions to create markets for their products.

"I would like to propose that our industry start on a more aggressive and a broader public relations, promotional and educational program that will sell our story to the public, creating an understanding of the values of a true comfort system of the caliber outlined in our manuals," he concluded.

"Modernization" a Broad Term

The importance of modernization in urban areas was stressed by Hal Chamberlain, modernization market manager for the Heating Controls Div., Minneapolis Honeywell Regulator Co. He pointed out that a high percentage of all industries, trade associations, governmental agencies and other groups have directly or indirectly entered into this modernization activity. Mr. Chamberlain described a recent round table discussion, attended by such officials as the FHA commissioner and the



AT THE COCKTAIL PARTY, H. C. Gurney *(center)* discusses his speech with L. W. Sutherland *(left)* and D. E. Collins . . .



TRUDY COUGHLIN pins a gardenia on Mrs. Frank P. Gibbons, while Ella Petro waits for the next lady to enter . . .



AND DEALERS *(l. to r.)* Leon La Charite and Martin Schaar, Milwaukee, and James Scott, Chicago, discuss the events of the day

HHFA administrator, at which it was agreed that saving and improving the 30 million existing urban homes is one of the country's most pressing problems.

Mr. Chamberlain feels that the term "modernization" should include a variety of factors: Rehabilitation of housing that is below local standards (test areas having proven that 90 per cent of the existing housing areas can be rehabilitated or modernized); demolition of the "hopeless" 10 per cent and replanting, rezoning, and rebuilding these areas as well as vacant sites; public improvements in schools, parks, playgrounds and other municipal projects.

He feels that the penetration of such a "huge modernization market" requires complete teamwork on the part of the federal government and all local and state administrations as well as builders, architects, realtors, property owners, and all the trades involved.

Mr. Chamberlain also described a number of trends which he feels retard modernization progress. He said that a recent survey covering 226 cities showed that over 10 per cent of them maintained only partial enforcement of ordinances, while about 20 per cent maintained little, if any. He also feels that the interest rate for certain FHA Title I loans is too high, but he believes that the FHA and the federal government will plan to have definite proposed changes ready for Congress during the 1954 session so that old and new housing will be "treated alike" in an effort to encourage industry to get into the modernization business.

Persistence Means Sales

C. S. Stackpole, vice president, Williams Oil-O-Matic Div., Eureka Williams Corp., continued the theme of the convention by declaring that to merchandise warm air heating you've got to get out and tell the prospects about the benefits of your industry. He pointed out that industry members less than 38 years old were at a disadvantage because they had never worked in a buyer's market. Mr. Stackpole said that his company will have only salesmen that will answer "NO" to these three questions:

1. Do you object to making evening calls?
2. Do you object to ringing doorbells to find customers?
3. Do you object to a straight commission as your compensation for the sales made?

It looks as if 1954 will be a year in which those who believe in a planned advertising program will achieve greater success than those that have no definite program, according to Mr. Stackpole. He pointed out that consistent advertising by a dealer will provide far better results than infrequent ads. He also cautioned against expecting to close every sale on the first call. Quoting the results of a recently completed tabulation, he pointed out that only 2 per cent of all sales were closed on the first call; the second call netted an additional 3 per cent; the third call accounted for 3½ per cent more; 10 per cent were closed on the fourth call; and 81 per cent resulted from calls made after the fourth call.

He concluded by suggesting that dealers continue to call on prospects even after the sale has been closed by some other dealer. He said that this not only cements the relationship established but shows an interest in the individual and frequently results in additional sales that would also have been lost if the contact had been allowed to fade away.

A Million New Homes in '54

The future of new home building was outlined by Leonard G. Haeger, director of research, National Association of Home Builders. Mr. Haeger's association represents 27,500 general contractors from whom it periodically gets data on the type of home in which the public is showing the greatest interest in the various areas, the demand rate for new homes, the trend toward modernization and purchase of older homes and local mortgage conditions.

Figures presented by Mr. Haeger indicate that about a million new homes will be built during 1954, with less than 20 per cent of these being custom built. The average house will have between 1000 and 1200 sq ft of floor area and 65 per cent of the homes will contain three or more bedrooms (many people favor four bedrooms and two complete baths). Of the homes, 88 per cent will be one story construction, with the remaining 12 per cent being 1½ and 2 story buildings. Few three story homes are contemplated. Of the houses to be built, a third will have basements, a third will use crawl space construction, and the remaining third will use slab floor construction.

It is expected that of the number of houses using some form of heating system, 80 per cent will use central warm air heat, with about two thirds of this number forced air and one third gravity. It is expected that about 12 per cent of the heated houses will use wet heat and the remaining 8 per cent will use wall and floor furnaces. The fuel ratio is expected to be 60 per cent gas, 31 per cent oil and 9 per cent other types of fuel.

15 Per Cent with Cooling

Air conditioning is a major item as far as builders are concerned, according to Mr. Haeger. He said that of the over 1,100,000 homes built in 1953, about 7 per cent had summer cooling equipment installed and that 1954 would see about 15 per cent of all homes with year 'round conditioning equipment installed as standard equipment.

The business sessions of the convention contained reports from the technical manual committees which indicated that Manuals 5, 6, 8, 9, 10 and 11 are to be revised and made available to members and non-members during the first months of 1954. (Details will be reported by American Artisan as the revisions become available.) Reports were also made on the work being done at the University of Illinois relating to small pipe heating in Research Residence 2 and summer cooling equipment performance in Research Residences 2 and 3. (When this information has been tabulated and released, it will be published by American Artisan.



They ALL come to see the man with all THREE —the EUREKA *Williams* dealer!

THREE FULL LINES of home comfort products put you way ahead. For one thing, you don't miss a sale—you can and do meet *every* customer's product preference. Another thing—there are no seasonal slumps when you're a Eureka Williams dealer. With OIL-O-MATIC and GAS-O-MATIC Heating *plus* AIR-O-MATIC Cooling it's "open season" for sales the *whole year 'round.*

If you're a progressive dealer with an eye to the future, try this combination. *One* famous name, based on thirty years of leadership—backed by *three* full lines—and boosted by *four-season* selling! Better write today for the profit-facts of the Eureka Williams Franchise.



OIL-O-MATIC Home Heating—with exclusive *Metered Low Pressure.* Complete line for homes of all sizes—for all types of heating.



GAS-O-MATIC Home Heating—with exclusive *Metered Flow Pressure.* Models for homes of every size, large and small.



AIR-O-MATIC Home Cooling—latest member of the famed Williams family. Installed with Oil-O-Matic, Gas-O-Matic or existing forced warm-air heating system to provide year 'round air conditioning at very low cost.

EW PRODUCTS

WILLIAMS DIVISION

Eureka Williams Corporation • Bloomington, Illinois

In Canada—Williams Oil-O-Matic of Canada, Ltd., Guelph, Ontario

Better Products, Better Made... *for better living!*

This Chase copper base flashing joint ← EXPANDS

no cracking... no buckling



Installation of Copper Base Flashing with new Chase Expansion Joint.

No danger of buckling or cracking with this new patented Chase Copper Expansion Joint. It permits copper base flashing to move with the changes in temperature... makes it even more permanent to use on flat built-up roof with masonry wall. Made of 18-ounce copper with open seams to permit fast, easy soldering to base flashing.

A "cap box" is provided with each expansion joint for easy attachment to the cap flashing.

FREE FOLDERS. *Write for information on Chase Copper Base Flashing Expansion Joint and the new Chase One-Piece Thru-Wall Copper Flashing and Cap Flashing Receiver.*

Chase Brass & Copper Co. Dept. AA154
Waterbury 20, Conn.

Please send me your free folder
☐ *Chase Copper Base Flashing Expansion Joint*
☐ *The New Chase One-Piece Thru-Wall Copper Flashing*

NAME_____

POSITION_____

FIRM_____

STREET_____

CITY_____ STATE_____



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Baltimore	Cleveland	Houston	Milwaukee	New York	Rochester†	Waterbury
Boston	Dallas	Indianapolis	Minneapolis	Philadelphia	St. Louis	(†sales office only)

CRAWL SPACE HOME —

(*Continued from page 93*)

can be seen on Fig. 2. The crawl space is only about 2 ft deep; therefore it cannot be used for the equipment. The garage seems to offer an excellent possibility, however, as it is generously sized and is adjacent to the utility room.

Most of the changes necessary to install the cooling unit can be seen by comparing Figs. 2 and 3. They are minor in nature. The central return grille formerly in the dining area wall adjacent the equipment room is moved to the living room wall adjacent to the garage. Air from the house returns through this to the cooling unit. From the cooling unit a new duct is installed through the attic space to the top of the counterflow heating unit, which remains in the equipment room. A 2 ton induced draft cooling tower is located in the rear of the home just outside the kitchen wall. The tower pump and water piping are located in the crawl space beneath the kitchen.

Crawl Space Closed for Cooling

The crawl space was constructed in accordance with NWAHACA Manual 4, with the recommended vapor barriers, insulation, and outside air vents. The vents are open during the summer to allow air to circulate and prevent moisture buildup. In the heating season, the vents are closed tightly, making the crawl space an integral part of the heating system. A controlled amount of warm air is discharged directly into the crawl space to provide warm floors in the rooms above. A special return duct in the equipment room allows crawl space air to return to the furnace directly. With the normal heating system, crawl space ducts are not insulated. Any heat leakage will contribute to the warming of the floors.

When a cooling unit is added to the system as we have planned, the summer crawl space ventilation requirements remain unchanged. Since the open vents would allow cool air to escape to the atmosphere, it is necessary to close tightly the crawl space outlets A and B and the special return duct normally used only during the heating season (see Fig. 2). Depending upon exact arrangements, it may be desirable to do this mechanically (by means of a linkage or cable) or electrically (by means of a small damper motor).

In addition to making necessary the closing of the crawl space supply ducts, the summertime use of these ducts for cooling creates another problem. Since the crawl space vents allow outside air to enter, the ducts will sweat and gain heat unless they are insulated. Insulation should be 2 in. thick and should be of the type which includes a vapor barrier on the outside. The use of insulation will tend to decrease the effectiveness of the heating system which depended, somewhat, on heat loss from the ducts to heat the floors. This deficiency, however, is expected to be of minor importance in view of the fact that we do supply warm air to the crawl space directly.

Is Duct System Adequate?

Whenever a cooling unit is added to a duct system that has been designed primarily for heating, the system must be checked on the basis of the air quantity required for cooling, since it is usually greater than the heating air quantity. This investigation is started by obtaining data on the furnace which for the sample house is as follows:

Input — 90,000 Btu per hr.
Output at Bonnet — 72,000 Btu per hr.
Cfm — 900 against 0.20 in. external static resistance pressure.
Blower hp — 1/6.

It was noted that the blower was adjusted for less than maximum speed. It was also found that the gas burner was adjusted for an input of about 81,000 Btu per hr. Assuming an input efficiency of 80 per cent, the furnace bonnet output was calculated to be 64,800 (81,000 x 0.80) Btu per hr. Further checking revealed that the air quantity had been adjusted to produce a rise of about 100 F through the furnace, in accordance with NWAHACA's recommendation for continuous air circulation as covered by Manual 6. Using the bonnet output and the temperature rise indicated above, the heating air quantity was calculated to be approximately 600 cfm.

To check the adequacy of the duct system for the 800 cfm which will be required for cooling, the procedure outlined on Fig. 4 may be followed. The first step is to make a sketch of the duct system, numbering the various registers and indicating cooling air quantities to be handled by each. (Cooling air is proportioned to each room on the basis of the sensible load in each room as indicated by the last two columns in Table 2). The sketch should be made to scale so that the longest run from bonnet to register can be identified. For this problem, the longest run happens to be from the plenum to register No. 1. This run establishes the resistance pressure against which the blower must operate, for if it is to move the required air to register No. 1, it can satisfy the requirements of the remaining registers (because they are all closer —and presumably offer less resistance—than the longest run).

After the sketch is made, a table is set up, as shown on Fig. 4, to analyze what happens in the longest run. Each section of duct carrying the same air quantity is listed, along with its size, length, and the equivalent length of fittings. Resistance pressure per 100 ft and velocity (as found in standard friction charts such as given in the ASHVE Guide) are listed. The actual resistance for each duct section is the product of the equivalent duct length and the resistance pressure per 100 ft. The resistance pressure of all the ducts and fittings is added to the resistance pressures of the return system (calculated by the same procedure as is used for the supply system) and to that of the cooling unit (obtained from manufacturer's data) in order to get the new external resistance pressure against which the blower must operate. In this problem, this figure is 0.544 in. water.

Rebalancing May Be Needed

The new speed and motor horsepower required by the blower to deliver the 800 cfm against 0.544

in. external static pressure can be obtained from the furnace manufacturer when necessary or it may be determined by the cut and try method. If the latter procedure is used, the dealer should be careful to check blower motor loading to see that it does not exceed the allowed service factor.

Once the equipment has been made to operate properly, the distribution system must be checked. The only means for adjusting air flow in the system described is by means of the perimeter floor diffusers. No particular problems are anticipated with this means of distribution, since floor diffusers have been found to work satisfactorily for both heating and cooling.

The presentation of this sample problem is not intended to set up a fixed procedure needed to solve all problems of this nature. Some may be solved more simply, whereas others may require a detailed analysis along the lines suggested.

REPAIRING THE PRESIDENT'S ROOF —

(*Continued from page* 111)

interiors, damaging ceilings, walls, and plaster.

The circular skylights, which required repair, are located over circular stairways. They are a beautiful sight to view from below, and the diamond shaped arrangement of the glass panels is unique.

The original glass was 1 in. thick — quite a contrast to the ¼ in. material commonly used today. Replacing the broken original glass with the smaller size called for a lot of manual labor, since the old putty held like iron and had to be tediously chipped out by hand, using hammer and chisel.

How Repairs Were Made

A good portion of the building is roofed with copper deck and copper gutters. Standing seams on the copper roofs provided "lungs" to allow the metal to breathe and move, but where the copper had been rigidly fastened in gutters, we discovered trouble. The worst possible technique for installing copper had been used — anchoring it down solidly on two parallel edges, one against the building in the granite, the other riveted to an angle of the outside edge. As a result, the copper split, buckled, and tore. Repairs required thorough cleaning, tinning and soldering on copper patches.

A large cast iron cornice around two cupolas was disintegrating at its joints and corners. To have replaced it would have proven a major operation; so to avoid further penetration by ice and the elements, the entire cornice was covered with a sheet metal case for protection. The cast iron was tapped and threaded and the new metal held in place with bolts. The galvanized covering was cleaned with vinegar prior to painting.

In addition to roof repairs our contract included items such as removing flagpoles and repairing chimney and valley flashings.

HEAT FOR OUTSIDE AIR

(*Continued from page* 89)

furnace of more than 130 F would result in a warm air plenum temperature higher than 200 F, which is not usually considered either desirable or acceptable.

Allowing for Intake Air

When ventilation air is brought in through an outside air intake duct, additional furnace capacity is needed to heat this relatively cold outdoor air. Since modern recirculating systems are designed on the assumption that the temperature of the return air is approximately 70 F, the required furnace capacity is likewise based on this assumption.

The following method is used to find the additional furnace capacity in thousands of Btu per hr (Mbh) needed to heat the ventilation air:

First, estimate the volume (cfm) of ventilation air to be introduced. For residences, many heating contractors who make a practice of installing outside air intakes assume that the volume (cfm) of such outside air will be equal to about 1.5 times the heat loss of the house when expressed in thousands of Btu per hour (Mbh). Thus, if a house has a heat loss of 60,000 Btu per hr, its heat loss may also be expressed as 60 Mbh. 1.5 times 60 gives an estimated 90 cfm of ventilation air to be introduced. Second, determine the temperature of the ventilation air. This is usually the outside design temperature. Third, find the additional heat (Mbh) needed to warm the ventilation air in the accompanying Table 3.

As an example in the use of Table 3, take a residence with a calculated heat loss of 72,000 Btu per hr, where the volume of ventilation air is to be 1.5 times the heat loss in Mbh and where the outside design temperature is −10 F. What additional furnace capacity is needed to heat this ventilation air?

The heat loss in Mbh is 72, and 1.5 times 72 equals 108. From Table 3 we see that at an outside air temperature of −10 F: 100 cfm requires 8.6 Mbh; and 10 cfm requires 0.9 Mbh. From this we arrive at a total of 110 cfm, requiring 9.5 Mbh additional furnace capacity. (In this problem, since the table does not show a value for 8 cfm, the line in the table for 10 cfm is used).

As another example, assume a church, school or similar building where 1280 cfm of ventilation air will be introduced at an outside temperature of 5 F.

From Table 3 we see that at an outside air temperature of 5 F: 1000 cfm requires 70.2 Mbh; 200 cfm requires 14.0 Mbh; and 80 cfm requires 5.6 Mbh. From this we arrive at a total of 1280 cfm requiring 89.8 Mbh additional furnace capacity.





"these features count on my jobs"

install Windmaster® and see for yourself

Installation Features—You can mount Windmaster on a sloping, horizontal or vertical pipe—thanks to the thrust bearing effect of the nylon bearings. The variable size E-Z 'Dapter pipe stub is already blanked and flanged—an optional accessory that guarantees full size opening. Calibrated weight makes the use of draft gauge easier—speeds up accurate adjustment without trial and error.

Performance Features—Large square vane provides bigger relief opening for faster action—more sensitive control of draft the instant it is needed. Vane is mounted on 45° angle, eliminating half the travel distance—no quivering to encourage pulsation nor lag-time to keep burner nervous.

Mr. H. F. Blackburn of Tri-State Heating Supply, Inc., Fort Wayne, Indiana Says: "We had three installations on outside chimneys that were jumpy or nervous. Different methods of correction failed especially in bad weather, until we installed Windmasters. Nervousness disappeared and spot checks show home owners no longer experience combustion annoyance as in the past. We recommend Windmaster to all of our dealers."

Construction Features—Permanently silent bearings of molded DuPont nylon never rust, corrode or need oiling—and they outwear steel. Projections on bearings are permanent, positive stops that can't get bent—the vane can't go too far. Heavy gauge steel construction—attractive appearance. Three control sizes fit six different pipe sizes.

Put a Windmaster Draft Control on your next heating job and see how these features help you make the installation easier and quicker. Then check up on the burner performance and see how Windmaster helps assure peak efficiency and reduces service call-backs.

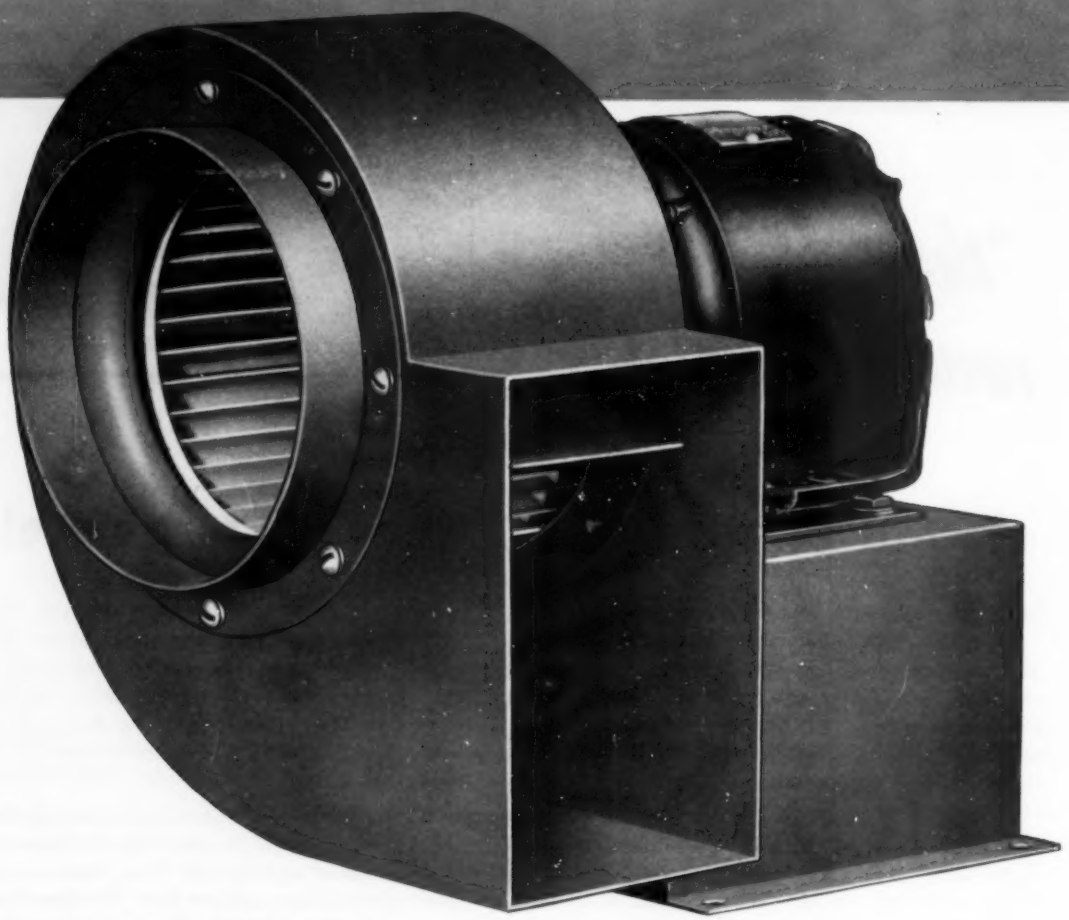
Stop in at your jobber's and pick up a Windmaster Draft Control for your next heating job.

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Windmaster Draft Control

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DIRECT DRIVE Here's a direct drive blower that you can install and forget. It's rugged and will take years of uninterrupted service. Used for general ventilation and exhaust, the housings are constructed for all conditions. Motors are available for all types of current.

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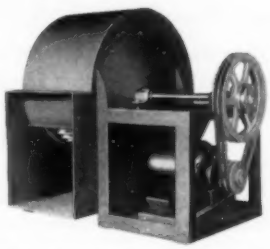
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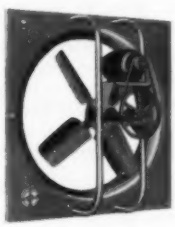
PEERLESS HELPS WHOLESALERS GIVE YOU ENGINEERING SERVICE AND PERSONAL CONTACT ON *Middle-Size Jobs*

ISN'T IT TRUE, Mr. Contractor, that over the years more fan and blower profits are made on middle-size job contracts? Peerless has the most complete line of fans and blowers in the middle-size job range. The line is competitively priced. Factory service and engineering help are quickly available at all times through Peerless wholesalers. For fans or blowers that are not in your wholesaler's inventory, Peerless will make on-time deliveries through him without red tape delay. The complete line and competitive prices will make more money for you. Through engineering service and on-time deliveries, you and your wholesaler have rapid capital turnover — **and, that's where everyone makes money.** Mr. Contractor, buy from your friend and ours, the Peerless wholesaler.

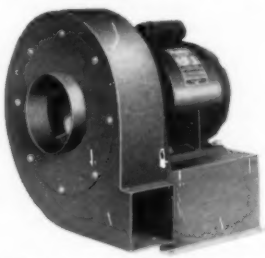
MR. WHOLESALER — if you don't handle Peerless Fans and Blowers and want to know more about our middle-size job plan, write us today.



BELT DRIVE UTILITY BLOWER Arc-welded housings and frames. Housings are convertible for various exhaust angles. Motor pulley adjustable for various speeds.



PVB EXHAUST FAN For factories, warehouses, etc. Ruggedly constructed for continuous duty. Horizontally or vertically mounted.



PRESSURE BLOWER For exhaust removal of dust, grit or high pressure conveying or cooling. Blades are balanced and self-cleaning. Bases and housings for heavy duty.



BLOWER-FILTER PACKAGE UNIT Clock or counterclockwise rotation — easily adapted to ventilation and exhaust systems. Motors and drives available.

THE PEERLESS ELECTRIC COMPANY

1405 WEST MARKET ST • WARREN, OHIO

RECIPROCAL LICENSING —

(*Continued from page 122*)

have resulted from the periodic meetings of the participating municipalities, other governmental units and the advisory committee (composed of industry groups and the utilities) have produced a far greater degree of public protection and safety, lower customer prices, and far greater industry efficiency. Each succeeding year implants more firmly in the minds of all participants the ever growing desirability and effectiveness of reciprocal licensing. Such is its story in the electrical field.

Set Up Plan for Heating Industry

On June 29, 1951, the Detroit Warm Air Heating Association called a meeting of all the governmental units which would be involved in setting up reciprocal licensing for the heating industry. Unlike the situation in the electrical field, there was no nationally recognized installation code. The whole procedure had to be "started from scratch." The formulation of a satisfactory installation code required two years of monthly meetings.

There are now 27 communities operating under the new standard reciprocal ordinance, and many more of them are getting ready to adopt the ordinance and code. The reciprocal provisions are in Section 2.13 of the standard reciprocal license, and read as follows:

"The city, village or township of —— shall permit contractors engaged in the installation of gas fired, oil fired, or coal fired heating equipment legally licensed by other municipalities of the state of Michigan to engage in the business of installing or contracting to install, alter or service gas fired, oil fired, or coal fired heating equipment, parts, or accessories thereof, or appurtenances thereto, within the corporate limits of the city, village or township of —— upon registration with the department and the payment of a registration fee, provided that the municipalities in which such contractors are licensed reciprocate in recognizing gas fired, oil fired and coal fired burner installation contractors duly licensed under the provisions of this ordinance by granting them the same privilege and charging the same license and registration fees.

"To be eligible for a reciprocal license, a heating contractor shall obtain his license in the municipality wherein the said contractor maintains his principal place of business. Also, the licensing ordinance, examinations, and examination procedures of such municipalities must be substantially equal to the requirements set forth in this ordinance. No gas fired, oil fired or coal fired burner installation contractor's license shall be recognized for the purpose of registration by the city, village or township of ——, which has been issued by a municipality which has failed to approve by affirmative action of its legislative body the reciprocal licensing provisions contained in this ordinance. The right of any municipality to participate in the reciprocating section of this ordinance shall be determined by the board of examiners of the reciprocating municipalities and based upon qualifications outlined in this ordinance."

Plan Is Succeeding

Since this reciprocal plan for heating is patterned after the highly successful one in the electrical field, and since minor defects found in the early stages of organization have been eliminated, a similar success may be expected in an even shorter time. Every foreseeable contingency has been worked out, including provisions for examinations for those communities which have no examining board of their own. Sales resistance has been overcome as an increasing number of communities joins. Only the mechanics of operation and the limited number of qualified inspectors available tend to hold things back.

Inherent in the plan itself, as now operative, is the inducement for all contractors in any community to influence their governing body to get their communities in. All licenses issued by any of the reciprocal communities are stamped "Reciprocal," and it is only these licenses which are honored by the other reciprocal communities. Since the contractor must have his business located in such a community to get "Reciprocal" stamped on his card, it follows that contractors from non-reciprocal communities must take out a license in each community in which they intend to work. Doing this in a number of communities and maintaining those licenses year after year (at $25.00 for each license and each renewal) can become an expensive business. It therefore behooves every contractor to do his utmost to get his community to join the plan.

Reciprocal Plans Tailored to Special Needs

Reciprocal licensing is considered by many to be more effective than state licensing because it can be tailored to area needs without regard to other sections of the state having different characteristics and objectives.

In Michigan, for example, all the larger concentrations of population are in the southern half of the southern peninsula, or in about one-third of the state. State legislation would necessarily take into consideration the entire state, and this might limit proper supervision.

Wider Coverage Planned

As previously stated, the present reciprocal code covers only gas, oil and coal fired heating installations. It is the intent of the heating reciprocal and advisory councils to eventually cover the entire field of heating, including the entire heating system and the sizing of equipment.

The licenses and coverage intended are as follows:

Gas fired equipment limited to input ratings not exceeding 500,000 Btu per hr, per unit.

Gas fired equipment with all input ratings (unlimited).

Oil fired equipment limited to units or burners designed for the use of Nos. 1, 2 or 3 distillates, as defined in the U.S. Dept. of Commerce commercial standard CS 12-40, having a maximum fire rate of 30 gph.

Oil fired equipment unlimited as to size or capacity of oil burner and designed for any grade of fuel oil.

Coal fired equipment limited to input ratings not exceeding 500,000 Btu per hr, per unit.

Coal fired equipment with all input ratings (unlimited).

Combination of any two limited licenses.

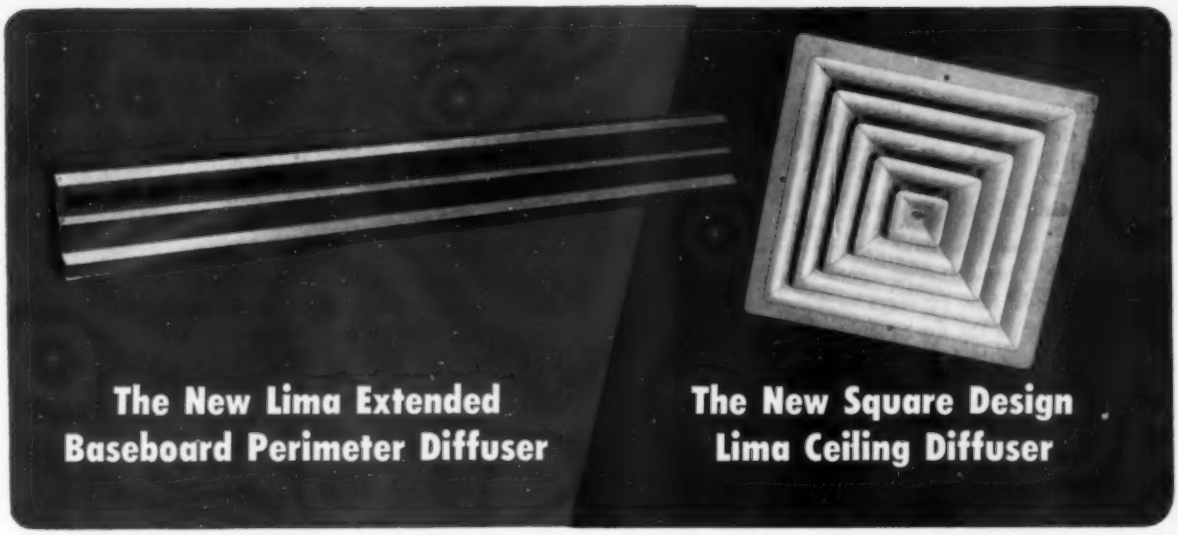
Combination of any two unlimited licenses.

Combination of all limited licenses.

Combination of all unlimited licenses.

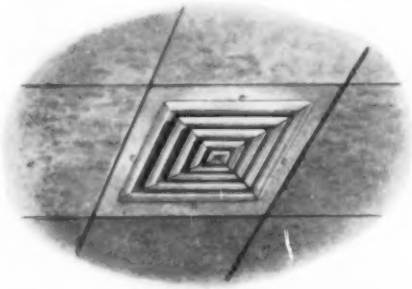
Combination of any limited and unlimited licenses.

This plan of reciprocal licensing has the unqualified endorsement of the contractors, the utilities and all municipal agencies which have participated in it both in the electrical and the heating industries, and is recommended by them for any metropolitan area which is surrounded by a number of other political subdivisions. It breaks down community boundaries in an orderly fashion, and permits the free flow of trade.





Beautifully styled and easy to install, this new Lima extended baseboard perimeter diffuser delivers air upward and outward at reasonably high velocity at proper angles for peak efficiency. Aspirating effect pulls air from within room toward outer walls without being noticed. In a new house, unit is set about ¾" into wall with little protrusion beyond baseboard. Face is removable. In remodeling work unit butts up against wall or baseboard.



See how this modern square design harmonizes with rectangular rooms and square block ceilings. Series of step-down vanes discharge air outward and slightly downward in all directions without drafts. Recommended for return air — especially in perimeter installations — eliminating large, unsightly grilles. Damper delivers air through full center opening for more complete 4-way diffusion.

2 new diffusers in the Lima quality line

Again Lima leads the way with advanced styling and engineering in perimeter diffusers for more attractive installations and more effective air diffusion in heating or cooling . . . remodeling or new house construction.

The new Lima Extended Baseboard Perimeter Diffuser is smartly attractive and blends beautifully with any baseboard. Assures effective air diffusion without drafts . . . will handle any standard perimeter installation for heating or cooling. Exclusive mechanical built-in damper has set screw control adjustment at the face. Standard four foot size. Will be available for March delivery, so include it in your early 1954 stock order.

The new Square Design Lima Ceiling Diffuser gives greater free area with full center damper opening. Damper closes tightly for full heat shut-off. Exclusive "balancing bell" feature simplifies balancing and puts volume control right in the diffuser. Modern light beige actual finish. Immediate delivery in six sizes.

See your local Lima jobber or write direct for complete details, and a copy of the new Lima catalog.

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Wall Diffuser | Floor Diffuser | Wall-O-Way | Floor Register



nationally advertised to architects and builders

HEATING OFFICE BUILDING —

(*Continued from page 97*)

facing the court as well as those around the outer walls. The west side of the building contains the kitchen, lunch room, and utility and storage rooms.

Zone Heating Used

As has been mentioned, to provide each portion of the building with a heating system that would respond to its individual needs, four furnaces were used for zone heating. Fig. 2 shows the duct plan for each zone.

Zone 1 includes the kitchen, lunch room and two offices of the south wing. The estimated heat loss for this zone is 117,782 Btu per hr; total duct length is 112 ft; and total number of diffusers is 12.

Zone 2 comprises the receiving rooms in the south wing and offices on the east side, the maintenance and reception rooms and the connecting corridor (Fig. 3, right). The estimated heat loss for this area is 271,592 Btu per hr; total duct length is 250 ft; and total number of diffusers is 30.

Zone 3 includes the offices of the north wing, with a heat loss of 136,514 Btu per hr; total duct length is 169 ft; and total number of diffusers used is 19.

Zone 4 consists of the two story portion of the building located at the northeast corner. The heat loss is 192,208 Btu per hr; total duct length is 270 ft; total number of diffusers is 20. This zone is served by a combination perimeter-ceiling diffuser system, perimeter diffusers being used for the first floor and ceiling diffusers in rooms on the second floor (Fig. 4, left).

Installing the Distribution System

There were 70 floor diffusers used of the 4 × 14 in. adjustable type along with one 4 × 10 in. and one 6 × 10 in. floor diffuser. The ceiling diffusers were all of the 12 in. diameter adjustable type.

The return air grilles for the first floor are located high on the inside wall of each room (Fig. 4, right). The return air system consists of a 14 × 54 in. space above the hall ceiling, which was formed by dropping the ceiling to the 8 ft height of the outside walls of the offices.

The round perimeter duct, which was buried along the foundation walls, varies in size from 21 to 6 in. in diameter. All duct connections were made on the outside of the joints to reduce air flow resistance. No slip joints or right angle elbows were used. Whenever it was necessary to make a right angle bend, the duct was turned with two 45 deg elbows with a short connection of straight duct between them. Some take-off fittings of various sizes are shown in Fig. 5, left.

In installing the duct itself, the contractor followed the standard practice of providing a 4 in. gravel fill beneath the concrete encasing the duct. The concrete used had a vermiculite base to provide as much insulating effect as possible for a minimum of temperature drop between the furnace and the furthest diffuser. The entire duct was buried to such a depth that there was a 2 in. layer of concrete around it.

Fig. 5, right, illustrates the technique used to push the concrete under the duct.

This building was completed and ready for occupancy on November 1, 1952. After one complete heating season it can be reported that the system met all the heating and comfort requirements that had been expected. Its operating costs based on the degree-day method compared very favorably with other types of heating. Tests taken throughout the heating system have revealed that the temperature drop between furnace and farthest register is most satisfactory. For zone 1, where the longest run is 56 ft, there was an average temperature drop of 5 F. For zone 2, where the longest run was 90 ft, the average temperature drop was 8 F. Zone 3 had 110 ft in its longest run and an average drop of 12 F. Zone 4, with a longest run of 43 ft, had a 4 F drop.



5 VARIOUS SIZES and types of fittings *(left)* were used in the perimeter system. Duct was installed over a 4 in. gravel fill and surrounded with concrete *(right)* which was tamped into place with a narrow wooden box

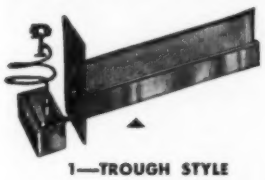


Tell'em the facts.....and you'll find

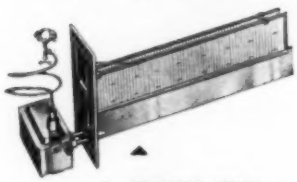
CONVECTOR HUMIDIFIERS

Easiest to Sell!

Furnaces not only do a better heating job, but they distribute necessary water vapor more efficiently when a Maid-O'-Mist Convector Humidifier is installed. Unlike ordinary humidifiers, this new type does not block the flow of warm air thru the plenum. Individual 3/8" copper troughs with patented evaporator pads permit unrestricted flow of air. Actually, this design gives the greater evaporating area necessary in modern short cycle heating. The entire unit is made of non-corrosive metals — copper and brass — can be installed simply by cutting one opening in the plenum.

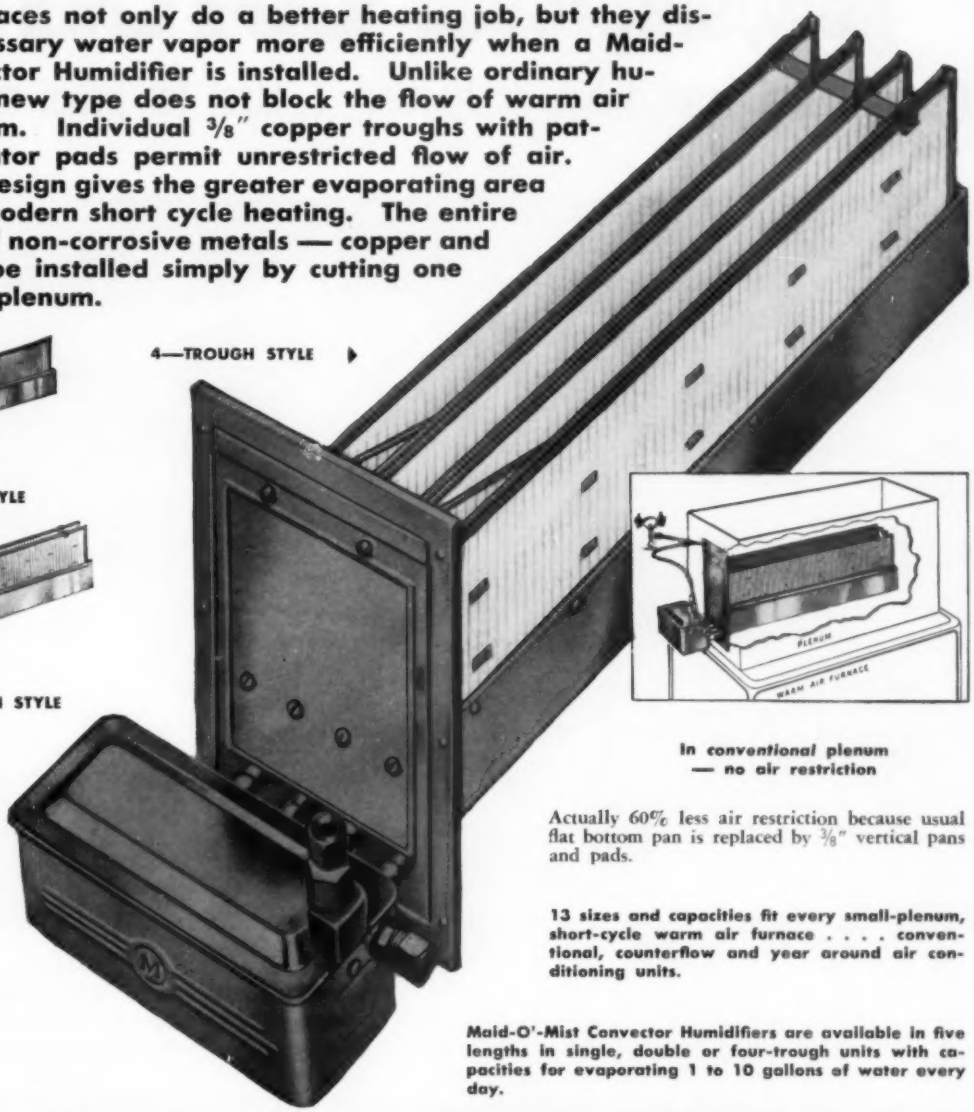


1—TROUGH STYLE



2—TROUGH STYLE

4—TROUGH STYLE ▶



In *conventional* plenum — no air restriction

60% less air restriction in plenum

30% more evaporating area

50% less installation time

Actually 60% less air restriction because usual flat bottom pan is replaced by 3/8" vertical pans and pads.

13 sizes and capacities fit every small-plenum, short-cycle warm air furnace . . . . conventional, counterflow and year around air conditioning units.

Maid-O'-Mist Convector Humidifiers are available in five lengths in single, double or four-trough units with capacities for evaporating 1 to 10 gallons of water every day.

MAID-O-MIST Inc.
HEATING SPECIALTIES

AUTOMATIC HUMIDIFIERS . . . . . AUTO-VENTS
WATER LINE CONTROLS . HEATING SPECIALTIES

MAID-O'-MIST, Inc.

3217 NORTH PULASKI ROAD . CHICAGO 41, ILL.

easier to sell...

new, improved Coleman

Cooling uses same tubes as heating... ideal for home modernization



new low prices with reductions up to $45 on famous Blend-Air furnaces! Blend-Air is the only small-pipe system in which furnace, blower, cooling mechanism, fittings and blenders are designed as one "package" . . . the only heating system in which heating comfort is *guaranteed* with a $1000 Comfort Bond.

new expanded line! New furnaces, new heating-cooling systems and new evaporative condensers are now on the market! All fittings are precision-made at *one* factory for dependable *system* performance. This works wonders in eliminating many maintenance problems! No "tailoring" of special parts is required!

new ease of installation! More convenient flue connections, newly designed fittings. Pre-engineered 3½-inch air tubes and blenders fit easily between studs in old and new homes. Minimum wall-cutting, no interference with home construction. Compact cooling units and furnaces go in basement, attic, utility room or crawl space.

but Coleman isn't a new name to your customers. It's been famous for 50 years for lanterns and camp stoves; and has pioneered home-heating comfort. Blend-Air gives greater air circulation, conditions the home for health and comfort. Send for details on Coleman's 1954 line. The Coleman Co., Inc., Dept. 752-AA, Wichita 1, Kansas.

easier to install Blend-Air cooling-heating

GREATER FLEXIBILITY TO FIT ANY SPECIFICATIONS

Now 14 year-round heating-cooling systems!

Cooling capacities from 2 to 5 tons, with 3 new self-contained units, including the most compact 5-ton unit on the market. Coleman Blend-Air Conditioning removes twice as much moisture from the air as ordinary systems. No noise or vibration because condensing unit can be installed in remote location. All connections accessible from front.

Now 3 different Water Misers!

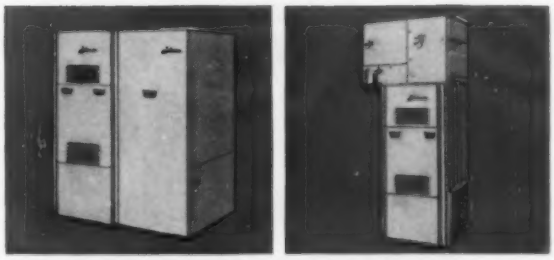
Two, 3 and 5 ton capacities. They install *anywhere*—in garage, for instance. Coleman Water Misers cut cooling water costs 97%, electricity 25%, eliminate cooling tower problems. Water Misers operate more economically, with less noise, and are more accessible for service.

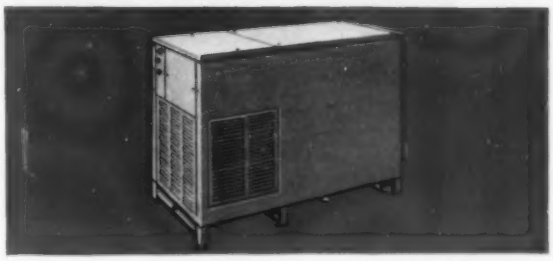
Three new horizontal furnaces!

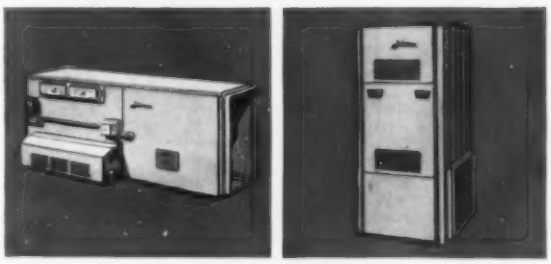
A total of 18 models now in the Coleman line. Horizontals are designed for limited-area applications, and are rated at 85,000, 100,000 and 140,000 BTU input. Great flexibility of manifold and control locations for easier installations. All Coleman furnaces have long-life burners and combustion chambers.

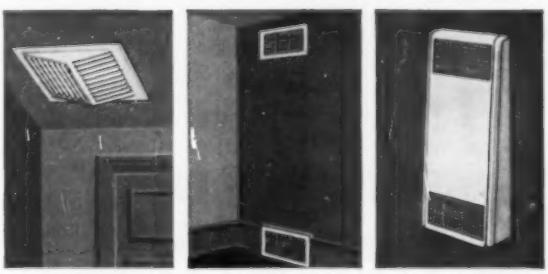
New Blenders!

Ceiling Blenders direct air flow to outside walls and windows for better perimeter cooling and heating. Ideal for kitchens, bathrooms, etc., or to supplement outlets in large rooms. Install with minimum plaster-cutting, eliminate redecorating expenses in old homes. They install quickly, easily. Adjustable Concealed Blenders fit neatly in standard walls, between studs. Cabinet Blenders are ideal for installations in existing homes.









CEILING BLENDER CONCEALED BLENDER CABINET BLENDER

OIL GAS LP-GAS

Comfort Costs So Little with

Coleman®

Blend-Air®

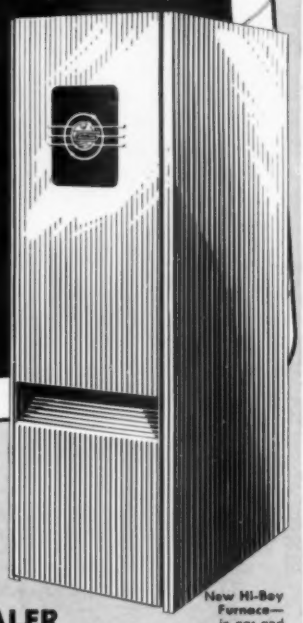
America's Leader in Home Heating and Air Conditioning

When you sell CHRYSLER AIRTEMP
you've got something extra to sell with . . .

CHRYSLER AIRTEMP HEATING
+ CHRYSLER AIRTEMP AIR CONDITIONING
= DOUBLE PROFIT OPPORTUNITY FOR YOU!

Chrysler Airtemp Air Conditioners are designed for quick, easy installation in association with the all-new Chrysler Airtemp Furnaces. Properly matched, these Chrysler Airtemp units for summer cooling and winter heating form perfectly balanced combinations which give the home owner the very best in year 'round air conditioning. Install a Chrysler Airtemp Air Conditioner when you install a furnace, or at any later date, and you make a *double profit!*

More and more heating dealers are going into year 'round air conditioning—with Chrysler Airtemp. But this ready-made opportunity to realize a double profit is only one of the many extras you get—as a Chrysler Airtemp Dealer. Check the seven listed below. Then mail coupon for complete facts and figures on the franchise which can offer you the greatest selling help in 1954.



New Hi-Boy Furnace—in gas and oil-fired models



New Lo-Boy Furnace—in gas and oil-fired models

1-2-3-4-5-6-7 additional extras you sell with —as a CHRYSLER AIRTEMP DEALER

Consumer Confidence—People know the Chrysler Airtemp name—associate it with engineering leadership—have complete confidence in the products which carry it.

Product Leadership—All-new Chrysler Airtemp Furnaces give you exclusive features that you can demonstrate to your prospects in terms of more efficient, more economical automatic heating.

Faster, Easier Installation—Amazing compactness of design, complete factory assembly and front location of flue outlet combine to permit faster and easier installation. You save valuable man-hours.

5-Year Warranty on new, super-efficient, corrugated-design heat exchanger gives your customers additional confidence in their choice of Chrysler Airtemp.

Smarter Modern Styling—All-new Chrysler Airtemp models feature new smarter modern styling—with plenty of eye appeal for homeowners.

More National Advertising to consumers and builders in leading publications is steadily pre-selling prospects on Chrysler Airtemp Heating and Air Conditioning, including many of the best prospects in your own trading area.

More Local Selling Helps—Chrysler Airtemp gives you a broad choice of tested and proved selling helps designed to work for you in your own market over your own name. New 20-minute full-color movie makes a terrific impression on every viewer!

CHRYSLER AIRTEMP

HEATING • AIR CONDITIONING
for homes, business, industry
Airtemp Division, Chrysler Corporation, Dayton 1, Ohio

AA-1-54

Airtemp Division, Chrysler Corporation
P.O. Box 1037, Dayton 1, Ohio

Please send us complete details concerning the Chrysler Airtemp Franchise.

Guaranteed by Good Housekeeping

Name_____

Address_____ Phone_____

City_____ Zone____ State_____

VERSATILE SHEET METAL SHOP —

(*Continued from page* 109)

ered to meet the height of the part being fabricated and freely moved back or forward along the track swung out from the supporting post.

An application of a standard tool to serve a specific purpose is the high speed friction saw (Fig. 7) that has a special bed to support steel roof deck panels which are cut by a special friction saw blade. Insulated steel (16 to 18 gage) building panels are cut in this way, as are corrugated sheets when non-standard lengths are needed.

Another handy tool developed by this company is the portable soldering furnace which uses LP gas and a connecting hose. The furnace is doubly insulated on the bottom and so ventilated that no heat is transmitted to the surface upon which the furnace is set. Fig. 8 shows this furnace placed upon a wood table which gives no sign of being overheated. Similar soldering sets are used on field jobs.

Much of the equipment fabricated in this shop is heavy and bulky. Delivery of such equipment might be hard on the standard truck. To improve the distribution of weight and to lengthen the service life of each truck, special bodies have been developed by the company, which does its own fabrication of these bodies. In all, the company operates one 5 ton truck, one 1½ ton truck, two ¾ ton pickups, one carry-all and one station wagon. The 5 ton truck (Fig 9, left) is used primarily for delivery of metal roof decking, and the ¾ ton truck (Fig. 9, right) has special racks that make it possible to load and unload ladders of different lengths with a minimum of effort.

The Staff Behind the Products

There are 62 employees who make up the McConnell company, 10 of whom perform administrative duties. The remaining 52 are either shop or field sheet metal men, and most of them have been trained by the company in its apprentice training program. This program is controlled by a joint committee made up of three members from the local sheet metal contractors' association and three members from the local union. This committee, in conjunction with the local board of education of the public schools, employs an instructor. Classes are conducted in shops of the contractors. The program also is tied in with the G. I. training program.

The administrative staff consists of the president-general manager, the vice president, the secretary-office manager and his assistant, the sales engineer, the estimator-engineer, the shop superintendent, the field superintendent, the receptionist-payroll clerk, and the bookkeeper.

The company offers certain employee benefits which help maintain a low turnover and high morale. There is a private parking lot for all employees. A "coffee break" is scheduled every morning, with the company providing coffee and sweet rolls. Kitchen and dining room facilities also have been provided (Fig. 10) so that employees need not leave the building to go to lunch. Every noon, the dining room offers a complete luncheon





10 KITCHEN FACILITIES *(above)* and dining room *(below)* are provided as part of the company's employee benefits program

at prices below those of nearby restaurants. There is always a choice of several menus.

Work Organized for Top Efficiency

The staff has developed methods by which men and work are synchronized in the most efficient way possible.

On the simplest level, working conditions are controlled for top efficiency. All layout benches are located beneath skylights to reduce the casting of shadows, assuring accurate measurement and marking.

In some maufacturing buildings of large corporations, the McConnell company may have as many as six or eight crews working in different parts of the building at the same time. This makes the job of supervising crews and supplying them with parts a difficult one, since some of the buildings range up to three blocks in length. One building, in which a ventilation system is being altered, has over 700,000 sq ft of floor area. To aid the field superintendent in getting around more easily, a three wheel scooter has been provided. The scooter has a rack built in the front that enables the driver to deliver urgently needed parts.

The staff has also developed an effective plan of inventory control which includes a complete inventory every three months. This method of control over the cost of doing business has proved so successful that a system of continuous inventory is now being worked out. Another organizational practice that has proven its value to this company is its weekly business sessions. These meetings bring together the entire official staff in a general discussion of mutual problems.

HEATING WHOLESALERS —

(*Continued from page* 125)

an experienced technical man who now supervises the summer cooling department. The influence of cooling equipment upon the annual dollar volume of business amounted to 30 per cent of the 1953 gross, Mr. Dulle said, and he felt that this figure would be even higher in 1954 and subsequent years.

Concluding his report, Mr. Dulle said that his company handles both packaged equipment and remote equipment, accessories, repair parts, and auxiliary supplies. In other words, it is a complete one stop source of supply. Regarding discounts, he said that all furnaces are sold f.o.b. the job site if located in the St. Louis area, but if a dealer purchases a furnace and a summer cooling package as a combination, and if he will arrange to pick up both items at the loading dock, a 3 per cent discount on the furnace is given, as the saving in delivery costs will add up to about the amount of the discount.

Mr. Dulle highly recommends that annual service contracts be sold customers because, as he said, the $40 to $50 obtained from this type of contract not only is a source of additional revenue but also assures the reporting of any equipment failure to the company—with the result that adequate service will be rendered by people trained to handle that type of equipment. Such contracts also help to keep the company name fresh in the customer's mind, especially when he is discussing his cooling system with friends. This "word-of-mouth" advertising is the best medium known to reach a prospective retail customer, he said.

Increasing Salesmen's Productivity

Although summer cooling is a field in which the wholesalers are vitally interested, they still are looking for better methods to merchandise the other equipment they handle. John C. Harkness, a management consultant, told the convention how the productivity of salesmen could be increased. His recommendations, based upon findings by his company, have been proved in other industries, he said. Mr. Harkness pointed out that any salesman calling on regular customers is lucky if he can schedule his calls so that one-third of his time is spent in actual contact with the customer. He should make the most of every minute he spends with the customer, according to Mr. Harkness.

Some figures based upon the cost per sales call indicates the value of having a detailed program for salesmen to follow, said Mr. Harkness. It costs $6.20 per call for each salesman earning $9000 annually against a prewar cost of $2.00 per call, and for a salesman earning $14,000 per year the cost is $14.20 per call. At these figures, every call must be pointed toward the objective of the salesman making and closing a sale.

Mr. Harkness suggested that the productivity of a salesman could be improved by planning with each man the territory he is to cover each day, deciding with him *what* to sell and *where* to sell it. Salesmen often do not like to be given definite programs to follow, but when a form of compensation is used that will allow the man with initiative to see how he can increase his income more by following such a detailed plan, the average salesman will respond with results that are agreeable to both the company and the employee.

11 Steps to Better Sales Meetings

Sales meetings are one way to keep a sales force on its toes, Mr. Harkness said, and he pointed out 11 steps to be followed in conducting a successful meeting. These steps have proved useful in many business organizations, and Mr. Harkness recommends that each of them be studied carefully. If a sales manager is uncertain of how to achieve each step as it applies to his firm, he should not hesitate to call on an outsider for aid. Advice could come from manufacturers, other members of his association or even from someone outside of his industry who may have had experience in handling successful sales meetings.

These 11 steps are:

1) Provide a space that is pleasant and conducive to learning — not the sales manager's office or the shop.

2) Make the room comfortable; see that the air temperature is high enough in winter and low enough in summer and that there is always enough outside air to keep the room from becoming stuffy.

3) Plan the meeting well in advance of the actual event. For monthly meetings, start at least 10 days before the date of the meeting, and for weekly meetings, start planning the day after the previous meeting has taken place.

4) Use variety at each meeting. Some different type of meeting each time will keep the salesmen's interest up. Meetings can be round table discussions, quizzes, sales presentations, sales skits, "pep talks," etc.

5) Appeal to all five senses of the individual to keep his interest at a high peak.

6) Use of props is important because they break the monotony of straight speech.

7) Rehearse the use of all props and demonstration equipment so that they function properly during the meeting.

8) Eliminate any outside competition such as outside noises or people passing through the room or telephone calls.

9) Start the program on time, stay on schedule and end it on time.

10) Obtain audience participation by asking leading questions that will obtain response.

11) Follow up what has occurred since the last meeting and tie it into what this meeting has pointed out.

Mr. Harkness concluded by suggesting that sales meetings should not be too long, nor should they be held too frequently. He stated that if a long meeting is judged necessary, frequent recesses should be given.

Each meeting, he said, should be carefully planned. A new sales tool should be provided, a new product should be introduced or improved selling techniques might be stressed. Other information that can be useful to the salesmen is data on the size of the market, its potential and the methods by which they can overcome the usual customer objections.

Describes Dealer Buying Habits

Edwin A. Scott, Jr., Edwin A. Scott Publishing Corp., told the wholesalers about the results of a survey on

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Known throughout the world for their sturdy all steel construction, Chicago Steel Press Brakes—Power Brakes and Hand Brakes—are the result of over 45 years' experience in developing and building these strong dependable machines for the fabrication of Sheet Metals.

Long life and trouble-free service are built into every machine from the Heavy Steel Power Press Brake to the Hand Bending Brakes.



SERIES D
Press Brakes for Heavy plate and Sheet Metal work.



SERIES L
Built for Heavy sheet metal and Light plate forming as well as multiple punching, shearing, etc. Built with machine tool precision for continuous high production.

WE MAKE A COMPLETE LINE OF INDUCTION HARDENED DIES FOR ALL PRESS BRAKES

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A GREAT ADVANCE IN DIE MAKING

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We control the DEGREE, DEPTH and the LOCATION of the HARDNESS in ONE ELECTRONIC PROCESS. This method of hardening was developed especially to meet these unusual requirements in long forming dies.



NO. 131
A NEW MODEL. Industry, large and small, finds this press the answer to its needs for speed and accuracy in the manufacture of light sheet metal parts and products.



STANDARD HAND BRAKE
The accepted standard in this class of Machinery. Used in the fabrication of Modern metals such as Stainless steel, aluminum alloys and high tensile alloys.



PORTABLE HAND BRAKE
Not a bench machine. It is a Standard brake in every way, an ideal machine for general shop, trade schools, etc. Can be taken along on the job, for air-conditioning, etc.



BOX AND PAN BRAKE
A universal Box and Pan Brake that combines the features of the Universal Brake with the Box and Pan Brake as well as the Standard Hand Brake. Used in manufacture of Electric switch boxes, panel board cabinets, conveyor buckets, tote boxes, Radio Chassis, etc.

DREIS & KRUMP MANUFACTURING CO.
7404 LOOMIS BOULEVARD • CHICAGO 36, ILLINOIS

the buying habits of warm air heating dealers and sheet metal contractors. Mr. Scott's data indicated that the heating wholesaler was the most important source of heating and cooling equipment, since the wholesale channel accounts for almost 60 per cent of the total furnace sales.

Other information presented was in the form of a geographical breakdown of the complete survey. The distribution pattern indicated a marked increase in the volume of business for 1953 in what had heretofore been considered wet heat markets.

Early morning business sessions beginning at 8:00 a.m. were well attended by association members and guests. The subjects discussed at the sessions included credit, collections, pension and retirement insurance, credit insurance, how to establish a NHWA region, responsibility for freight rates, claims and packaging, and material warehousing.

Give Tips on Materials Handling

The activity at each of these sessions followed very much the same pattern as was followed in the material warehousing session, for which Jack Allen was chairman. Mr. Allen started the discussion on warehousing and materials handling by describing his own experiences with various pieces of equipment in his new warehouse.

Mr. Allen explained his method of piling galvanized sheets into a rack which he had designed so that cubic dimensions were used rather than sq ft areas. Saul Franklin of Franklin Steel, Newark, N. J., told how his company handles stock with a tramrail system from dock to storage and from storage to shipping platform. Ben Lewis of Palmer-Donavin Co., Columbus, explained the use of various methods in its warehouse, as did Oscar Brauer of St. Louis, who discussed a gravity conveyor system for the handling of all items.

In a general question period following, Bert Earnshaw of Mansfield, O., Jack Eckstein of Pittsburgh, and Jack Allen discussed the proper use of fork lift trucks—either gas or electric operated—for efficient materials handling. There was some discussion on the use of hydraulic lifts for truck tail gates, and it was agreed that this method was growing in favor because of the labor factors involved.

What Is Present Role of FTC?

The promotion of fair competitive conditions in industry was explained by Commissioner Albert A. Carretta of the Federal Trade Commission. Mr. Carretta feels the present role of FTC with respect to business remains as it was defined in 1914 by President Wilson when he recommended to Congress the creation of an interstate trade commission. President Wilson said:

"What we are proposing to do is not to hamper or interfere with business. . . The government and businessmen are ready to meet each other half way in a common effort to square business methods with both public opinion and the law. The best informed men of the business world condemn the methods and processes and consequences of monopoly as we condemn them; and the instinctive judgment of the vast majority of businessmen everywhere goes with them."

Mr. Carretta stated that this is his philosophy with respect to the position which the FTC is now supposed to occupy in the field of regulation of American business. "It must be remembered," he said, "that the legislation as proposed by the President was not to be enacted for the purpose of ham-stringing American business as such. Its primary purpose though, as for all antitrust legislation, was the protection of the American public."

The important part of this act for heating wholesalers is Section 5, which makes it unlawful for persons, firms or corporations to engage in unfair methods of competition in commerce, he said. In 1938, this section was amended by Congress to include unfair or deceptive acts or practices in interstate commerce.

NHWA Helping to Revise Trade Rules

He continued, "This brings me to the principal question in the title of my talk: How can the Federal Trade Commission best foster and promote the maintenance of fair competitive conditions in industry? We all realize by this time that the language of the acts administered by the Federal Trade Commission is rather general in nature. The commission, for more than 30 years, has been attempting to implement such language by publishing trade practice rules for more than 180 industries. The purpose of these trade practice rules is obviously to spell out in clearer language what the Congress intended when it used the broad and general language in the statutes. Of course, I must admit that in some instances the trade practice rules did little more than paraphrase the words of the statutes. However, the commission is now attempting to publish trade practice rules in language which is clear and simple and which is readily understandable to those who are willing to understand the language. By this I mean that in most industries, there is a small minority of 'chiselers' whose business is conducted in any way—whether legal or illegal—so long as the operators can make a 'fast buck.' Such people are not interested in reading any trade practice rules — whether clear or unclear."

Mr. Carretta went on to discuss the fact that NHWA is cooperating in the revision of trade practice rules which were first published in 1929. He urged members to take an active interest in this work so that the commission might be well advised when it votes to revise the rules.

Must Cooperate to Enforce Rules

He also answered the question of how the commission enforces compliance with trade practice rules. Obviously, they are not self-enforcing, he said. Yet they are the means to the attainment of the commission's ultimate objective—preservation of our basic system of private enterprise.

In order effectively to police each industry for which trade practice rules have been published, the commission



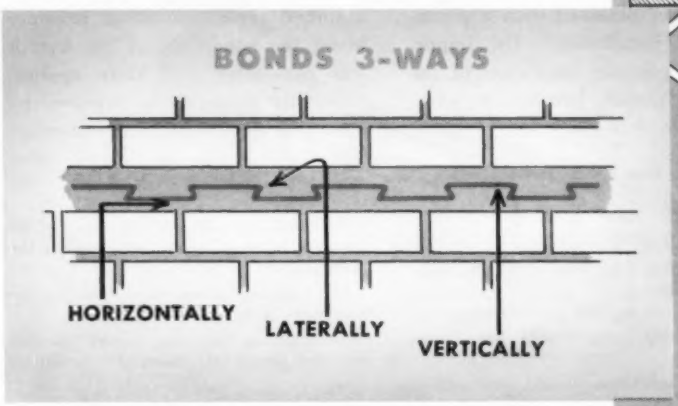
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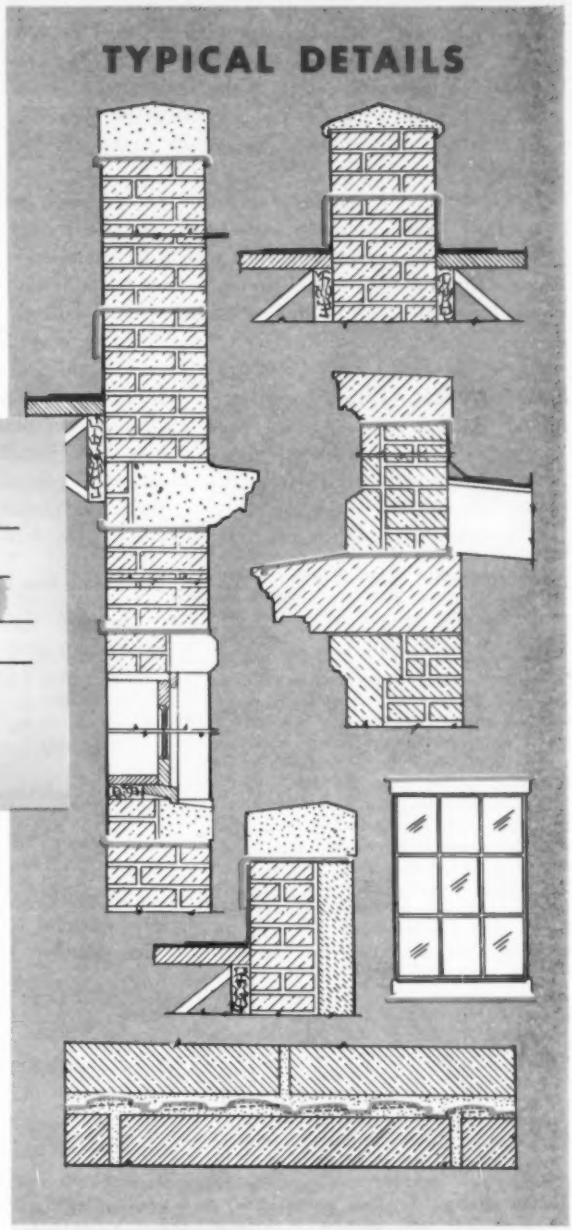
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MAJESTIC

3-Way Thru Wall

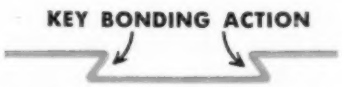
COPPER FLASHING





Exclusive, undercut crimp design assures complete bonding in all three directions plus the mechanical bonding strength of the "Key Bond" feature. Made of 16 ga. soft copper, most fabrication can be done on the job and unusual flexibility is present to compensate for sinking, expansion or contraction. Crushing is unlikely because the Majestic design is load bearing and resists the crushing influence of heavy cornice block and upper masonry. Natural drainage channels to take off weepage into gutters are an integral part of the exclusive design. For the complete permanence and dependability of Hussey Copper plus the exclusive installation and mechanical features of the Majestic design . . . specify Hussey Majestic 3-Way Thru Wall Flashing.

KEY BONDING ACTION



Like a keyway in a machine shaft, this unique feature of Majestic Flashing bonds the metal mechanically with the mortar; eliminates separation and falling masonry.

C. G. Hussey & CO.

COPPER & BRASS SINCE 1848

HUSSEY

(DIVISION OF COPPER RANGE CO.)

Rolling Mills and General Offices: Pittsburgh 19, Pa.

Seven Convenient Warehouses

- CHICAGO
- NEW YORK
- CINCINNATI
- PHILADELPHIA
- CLEVELAND
- PITTSBURGH
- ST. LOUIS

would have to have thousands of investigators traveling about the United States, "snooping" into the businesses of our millions of citizens, he said, pointing out that this is hardly to be desired. "We must start with the premise that by far the great majority of businessmen are honest and law-abiding," Mr. Carretta stated. Further, the amount of money allocated to the Federal Trade Commission for the enforcement of the various acts it administers will not permit any such widespread investigations relative to compliance with trade practice rules, he said.

How, then, can the Federal Trade Commission be advised of non-compliance with trade practice rules? It must rely upon complaints filed with it by trade associations, by industry committees, by better business bureaus, by competitors of those charged with violations, by members of the public, and through similar means.

"If this statement be accepted as true," Mr. Carretta said, "then you can all appreciate the reliance which the Federal Trade Commission places upon the cooperation of trade associations. With your help, we can help you keep your industry clean. Without your help, we might keep it clean anyway because, since self-preservation is the first law of nature, individual members of your association will, when hurt by a malpractice of a competitor in the industry, communicate with the commission and seek its assistance.

"I should like to urge each of you to cooperate with your association in seeing to it that the rules are complied with by all of the members of your industry. And above all, remember that the Federal Trade Commission was established to assist you and not to harass you."

EDGE INSULATION HEAT LOSS —

(*Continued from page* 107)

paths of heat flow. The following results are shown:

1) Applying edge insulation reduced the heat loss through the upper part of the foundation wall. The addition of high resistance material near the exposed part of the wall, however, caused the heat flow to seek a round-about path through less resistant material.

2) The 1 in. vertical insulation could be improved by the use of a depth of insulation greater than 18 in. Similarly, it was also found that the L type insulation could be improved by extending the insulation further under the slab.

3) The percentage of heat flow for the two cases with 1 in. insulation and no edge insulation is shown in Table 2. As can be seen, the same panel heating effect was obtained in the two cases, but the subfloor loss was greater for the uninsulated edge. The difference was more pronounced when the 2 in. edge insulation was applied.

4) Application of the data obtained from the Floor Slab Laboratory to actual residential conditions indicated that the subfloor loss would range from about 14 to 24 per cent of the total design heat loss of a basementless house. The smaller percentage would apply to an uninsulated house without storm sashes, whereas the larger value would apply to a well insulated house provided with storm sashes. At first glance, it would appear that a 14 to 24 per cent increase is a large penalty to pay for maintaining warm floor surfaces. It should be noted, however, that without any heat ducts in the floor, the subfloor losses would range from 8 to 16 per cent of the total design loss.

In other words, the warmer floors obtained with the perimeter system would increase the total heat loss about 7 per cent as compared with that for a conventional heating system in a slab floor house. This price is not considered to be prohibitive considering the increased performance obtained with a perimeter duct installation. The importance of adequate insulation of the floor slab cannot, however, be overemphasized.

Materials for Edge Insulation

The edge insulation should have three main properties:

1) The insulation should be sufficiently rigid to withstand the pressure exerted by the concrete during the pouring operation.

2) The insulation should not absorb moisture.

3) The insulation should resist decay and rot.

A number of insulating materials were available when the tests were begun in 1949, but a larger number have since been offered commercially. Nine different types of edge insulation were placed in a vertical position along the wall of one of the rooms. Each specimen was embedded to a depth of 18 in. so that the upper 4 in. was exposed to concrete, the next 4 in. was exposed to gravel, and the lower 10 in. was exposed to the soil. The moisture content of the soil was 16 per cent, based on dry weight. The insulation specimens were weighed and then installed 24 hours before the concrete was poured. At the end of 300 days the specimens were removed and weighed.

Table 3 is a summary of the results obtained. Samples 6, 8, and 9 seemed to be best adapted for the purpose. Although samples 3, 4, 5, and 7 (which were asphalt-coated or asphalt-impregnated fiberboards) absorbed some amount of moisture under the conditions of the test, it was considered that their application could be materially improved by observing the following precautions:

1) Using L type construction, which eliminates direct contact with the underlying soil.

2) Providing sufficient drainage by the use of a layer of coarse gravel under the insulation.

3) Applying a waterproof coating to both sides of the insulation.

4) Applying the vapor barrier (located over the gravel fill) under the insulation.

SPECIAL TANK HOOD —

(*Continued from page* 114)

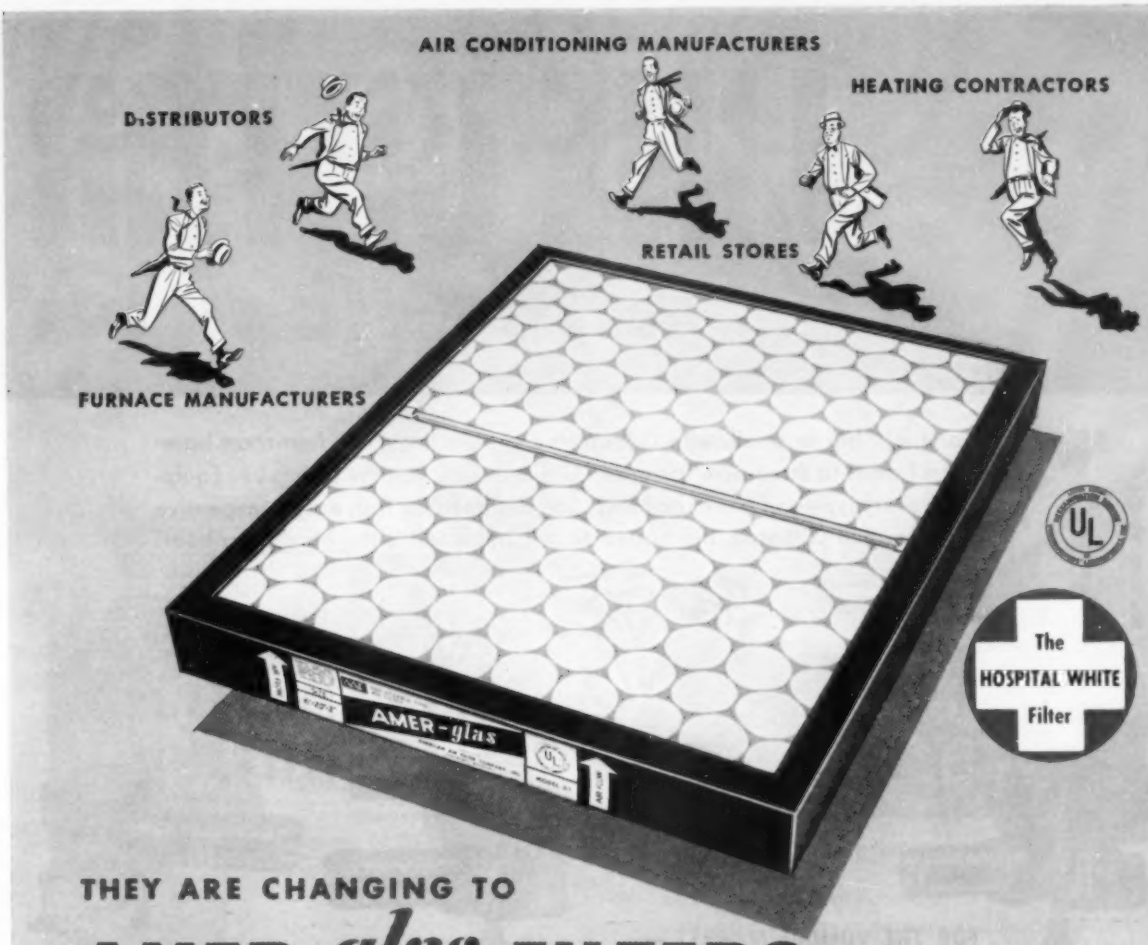
an arc. Measure arc G-H on Fig. 4 and with point G′ on Fig. 5 as center, cut the arc which was made with radius 7′-H′, and mark the point H′.

To Lay Out Throat Patterns

To calculate the length of a 60 deg arc, multiply the given radius by the constant, 1.047. Thus, 1.047 × 2 = 2.094, or 2⅛ in. Draw a rectangle 2⅛ in. long × ¼ in. wide; add allowances for seams and joints and lay out the holes.

The large collar stretch-out is 1.047 × 3.75, which equals 3.92 or 3-15/16. Draw a rectangle 3-15/16 in. long × ¼ in. wide. Add allowances for seams and joints and lay out the holes. The round collar stretch-out is calculated by multiplying the given diameter by 3.14.

CLARK 53



THEY ARE CHANGING TO

AMER-*glas* FILTERS

What are **you** waiting for?

You're interested in profits! You're interested in rapid turnover! So—it's just commonsense to expect you to want more information about the amazing AMER-glas Filter that is nudging first position in sales after only three short years on the market.

WHAT'S THE GIMMICK?

There is no gimmick, just an exceptionally good filter manufactured by the leader in air cleaning equipment with over thirty years experience devoted exclusively to air filters. This—as well as a consistent policy of selling only through leading distributors protects your interest—insures continuing profits. Take the next step now. Send in the coupon for more facts about AMER-glas profits. What are *you* waiting for?

Interested in a tested and proved electronic home filter?

AAF American Air Filter COMPANY, INC.

AMERICAN AIR FILTER CO., INC.
355 Central Ave., Louisville, Ky.

Please send me complete information on AMER-glas Replaceable Air Filters. Show me proof of the profits!

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☐ Please send me information about Electro-KLEAN the electrostatic filter for home furnaces.

CLARK 53

LINE UP FOR *with Gilbarco's*

Get any job, big or small, with Gilbarco's *complete* line! From four-room basementless homes to three-acre factories—Gilbarco gets you the orders . . . *Equipment for every type and size of building*... all designed for fast, easy, inexpensive installation. Sell Gilbarco, the easiest to sell because it's the hardest to beat!



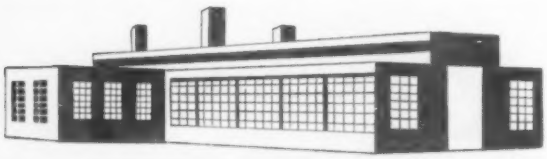
FOR THE VOLUME MARKET—

Gilbarco's easy-to-sell GCS Oil Burner is for average size homes. This rugged model has the patented Economy Clutch, the greatest sales-building feature in the industry!



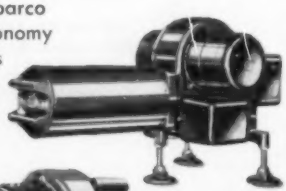
FOR LARGER HOMES—

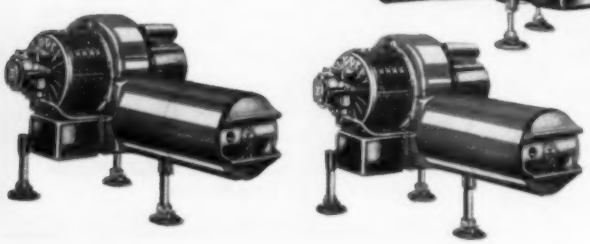
Gilbarco GC 1 and GC 2 models with the Economy Clutch are designed for really big home heating jobs. They're the ideal burners for large conversions and replacements!



FOR COMMERCIAL AND INDUSTRIAL JOBS—

Available in three different sizes, Gilbarco Commercial Oil Burners with the Economy Clutch can handle jobs with capacities up to 10,000 sq. ft. of steam and 16,000 sq. ft. of hot water.







FOR STEAM AND HOT WATER—

Gilbarco Boiler-Burner Units are available in welded steel or cast-iron models. Compact, attractive, economical to install and operate.

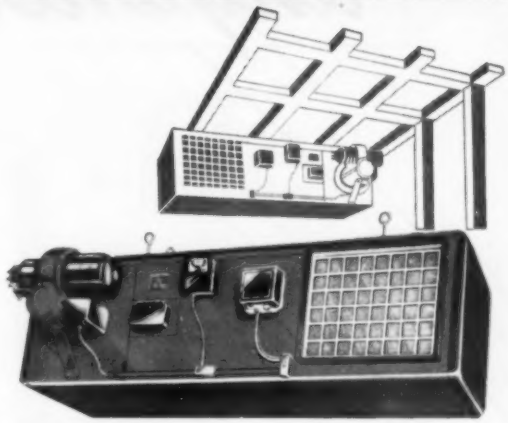


MORE BUSINESS
complete line



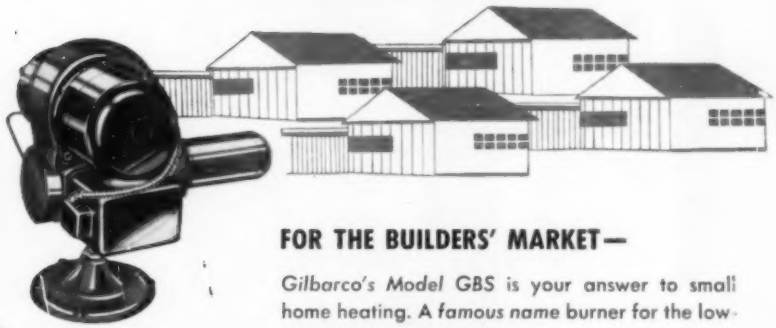
FOR SPACE SAVING COMPACTNESS—

Gilbarco Vertical "Space-Saver" floor model; 85,000 B.T.U. capacity. Uses less than 3½ sq. ft. floor area.



FOR CEILING SUSPENSION HEATING—

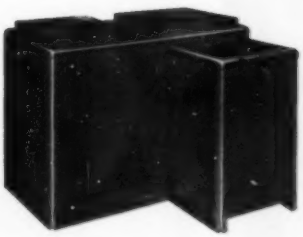
Gilbarco Suspended Furnaces are the answer for service stations, stores, garages, commercial buildings and multiple industrial installations. 115,000, 160,000, 200,000 B.T.U. capacity.



FOR THE BUILDERS' MARKET—

Gilbarco's Model GBS is your answer to small home heating. A *famous name* burner for the low-price market.





FOR ECONOMICAL HEATING—

Gilbarco compact *Warm Air Conditioners* are famous for easy installation and economical operation. GWA models are available in 115,000 and 135,000 B.T.U. capacities. GRF "Low-Boy" units come in 4 sizes up to 175,000 B.T.U. capacity.

Gilbarco

Gilbert & Barker Manufacturing Co.
West Springfield, Mass.
Toronto, Canada

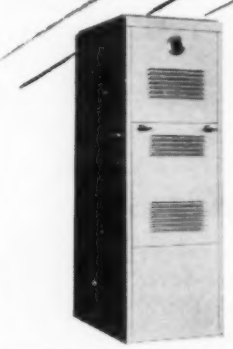
You can rely on

RHEEM

anywhere everywhere



MODEL 3202



MODEL 3205



MODEL 3302



MODEL 3203





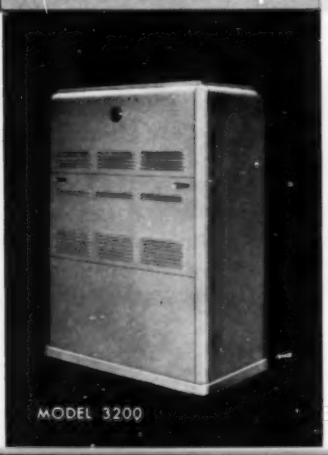
MODEL 3201



MODEL 1801



SERIES 2400



MODEL 3200



MODEL 2436

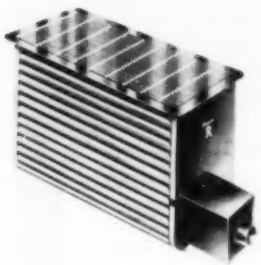
Every

RHEEM

Gas Furnace is

FIRE-TESTED

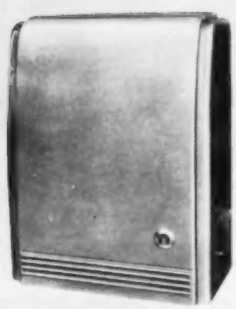
Factory inspectors connect gas and power. Pilot is lighted, burners are fired. 48-point test makes certain that controls work perfectly . . . that every connection is tight and safe. You know you can rely on Rheem.



SERIES 1603B



SERIES 1603B



MODEL 1703

WINTER AIR CONDITIONERS

Fully automatic, factory assembled, forced warm-air furnaces. All-steel, electrically welded. "Flame-shaped" combustion chambers and multi-section heat exchangers provide high heat transfer. Enclosed controls; large capacity blower-motor, baked enamel finish. AGA approved. Available in 12 ga. and 16 ga. heat exchangers.

Model 3202 — Hi-boy — for utility room or basement installations. Top rear flue outlet. Casing sides equipped with knockout plates for optional side cold air return. Five sizes from 66M through 150M Btu input. AGA approved for all gases, including LP-AIR. Dual-gas units available.

Model 3203 — Hi-boy — same as Model 3202 but with top front flue outlet. Six sizes, 60M—150M Btu input. Lower input range for zero clearance.

Model 3402—Lo-boy—for basement installations. Top rear flue outlet with built-in draft diverter. Four sizes from 77M through 150M Btu. Available for all gases, including dual-gas operation.

Model 3201 — Zero clearance approved for closet, utility room, basement. Seven sizes, 60M—150M Btu input.

Model 3205—Counterflow—for perimeter heating applications. Blower-filter assembly mounted in top of unit. AGA approved for zero clearance and installation on combustible floors with all gases. Two sizes; 80M and 100M Btu input.

Model 3200 — For large homes, churches, stores. Five sizes, 168M—350M Btu input.

GAS-FIRED GRAVITY FURNACES

Model 3302 — Fully automatic, factory assembled. Low cost installation and operation. "Flame-shaped" combustion chamber and multi-section heat exchanger. Inner casing insulation, enclosed controls. AGA approved for all gases. 77M, 95M and 112M Btu input sizes.

RECESSED WALL HEATERS

Model 1801 — For small homes and "hard to heat" rooms. Fits between 16½" studding. 60" high, 17" wide. Single wall unit—28M Btu input; dual wall—50M Btu. Thermostatic or manual controls.

OIL-BURNING FURNACES

Model 2436—Oil-burning winter air conditioner provides economical home heating. "Flame-shaped" combustion chamber and multi-section heat exchanger. Blower and motor assembly rubber cushioned for quiet air delivery. Automatic controls. Available in three lo-boy sizes; 80,000, 100,000 and 120,000 Btu bonnet output capacities.

CONSOLE HEATERS

Model 1703 — Minimum space requirements. AGA approved for natural, manufactured, mixed and LP gases. 25M, 35M and 50M Btu input sizes.

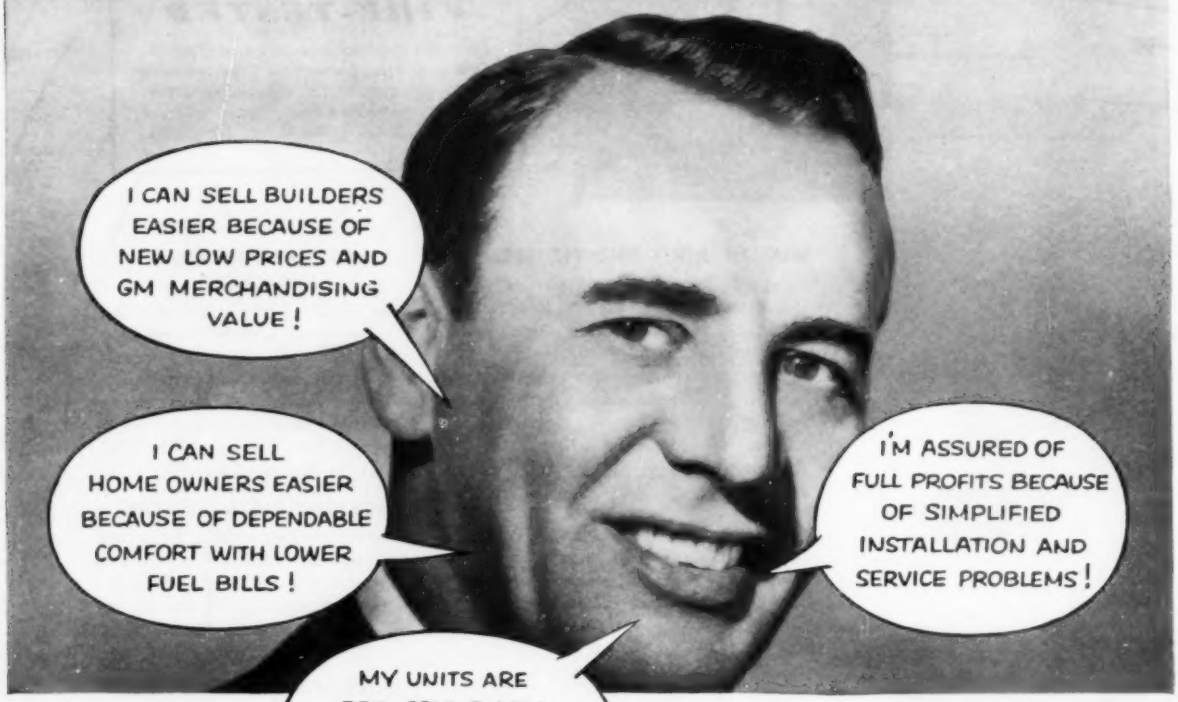
FLOOR FURNACES

Series 1603B—Flat register and dual wall types. Rapid noiseless heat recovery. AGA approved for all gases.

HORIZONTAL FURNACES

Series 2400—Electrically-welded all-steel heat exchanger, enclosed controls. AGA approved for natural, manufactured, mixed and LP gases. 60M, 80M and 100M Btu input sizes.

With General Motors Backing, Delco-Heat Gives Me An Exclusive 4-Way "Profit Program!"



It's the biggest money-making franchise in the industry!

General Motors makes Delco-Heat! That's the big story of the year in home heating! It means *lower cost* because Delco-Heat is GM "assembly line" built, and more heat from fuel because it's GM precision engineered. No wonder dealers everywhere are finding the Delco-Heat franchise the shortest, most direct way to greater profits!

The low cost Model GBC90-H is a space-saving Gas Fired Conditionair package unit with 90,000 Btu input. Shipped assembled for easy, fast installation. Exclusive mass production wrap-around-design steel cabinet. Circle-Air Radiator adds extra heating surface — improves efficiency. Delco-Heat Flame-Tailored inshot Gas Burner, vibration-free Rigidframe Motor, Centrifugal Blower and replaceable air filter.

Get the facts about the new franchise territories available now. Write to Delco Appliance Division, Dept. AA, General Motors Corp., Rochester 1, N.Y.



GM GENERAL MOTORS

DELCO-HEAT

For a good deal— DEAL WITH DELCO

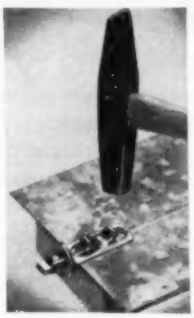
... a complete line of automatic oil and gas-fired conversion burners, Conditionair forced warm air furnaces and heating and cooling units, boilers, water heaters, and electric water systems.

How to Build Heating and Cooling Profits With E-Z-ON Damper Regulators

Here are practical pointers on how the use of E-Z-ONS cut installation time, eliminate extra work and make it possible to handle a greater volume of business . . . with increased profits.



E-Z-ONS have a newly designed Automatic Slot Opener that permits instant assembly of the regulator to the damper. The regulator is simply positioned on the damper by sliding it over the scribed center line. E-Z-ONS accurately stay in position until a hammer blow drives the sharp prongs through the damper. If a Gerett anvil is used the clinching is automatic.



Advanced design of E-Z-ON damper regulators permits on-the-job assembly with only a hammer—no drilling—no rivets. E-Z-ONS streamlined design gives greater satisfaction because they avoid three major causes of noise, rattly rivets, loose holes and obstructed air flow. Job histories prove that your apprentice or journeyman can save two-thirds of their time in making up dampers with E-Z-ONS.

E-Z-ONS IDEAL FOR AIR CONDITIONING

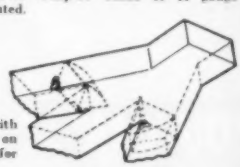
Recent surveys reveal that the coming year will be the biggest in residential air conditioning. Here again, E-Z-ONS can give you a competitive jump. With the indicating handle, E-Z-ONS permit simple damper changing from winter to summer settings. In high velocity systems E-Z-ON Regulators can be used on dampers as small as 3¼" dia. or the head piece only can be used if desired. E-Z-ON regulators work equally well on round or rectangular volume and splitter type dampers.

FAMOUS E-Z-ON STANDARD DESIGN No. 27

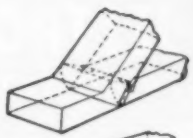
⅝" bearing, dozen to a box, lists at $3.30. Consists of: solid end tail piece, threaded head piece and wing nut. Made of 16 gauge steel and heavily zinc plated, E-Z-ON prongs are strong enough to pierce 22 gauge metal.

SUPERIOR E-Z-ON "SNAP-TITE" DESIGN No. 29

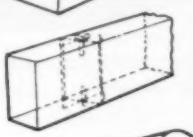
⅝" bearing, dozen to a box, lists at $4.00 and has tail piece with retractable snap end bearing, threaded head piece and wing nut. This eliminates need to bend damper or spring duct to insert damper. Made of 16 gauge steel, heavily zinc plated.



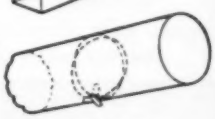
Dampers installed with E-Z-ON Regulators on one side or edge for branch ducts.



Slitter Damper attached at edge with E-Z-ON Damper Regulator.

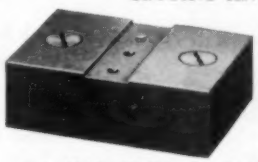


Volume Damper, with E-Z-ON centered at each end.



E-Z-ON Damper Regulator fastened to small damper with headpiece only.

STANDARD and "SNAP-TITE" SETTING ANVIL



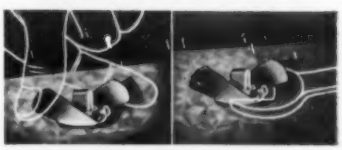
Saves time assembling regulators, operating on the principle of a rivet set. Can also be used in kick or power press. Completely sets and fastens a unit in one operation. Of hardened steel. Weight 1¾ lbs., size 1" thick, 2" wide, 3" long — complete with fastening screws. Lists at $2.50 each.

INDICATOR HANDLE



No. 26 Indicator Handle, lists at 36¢ per dozen. Ideal for systems that use same ducts for heating and cooling because it clearly shows damper position . . . can be turned to summer or winter setting. Made of 19 gauge steel, heavily zinc plated. Small slot in end allows use as a tool to engage tongue of regulator in place of pliers.





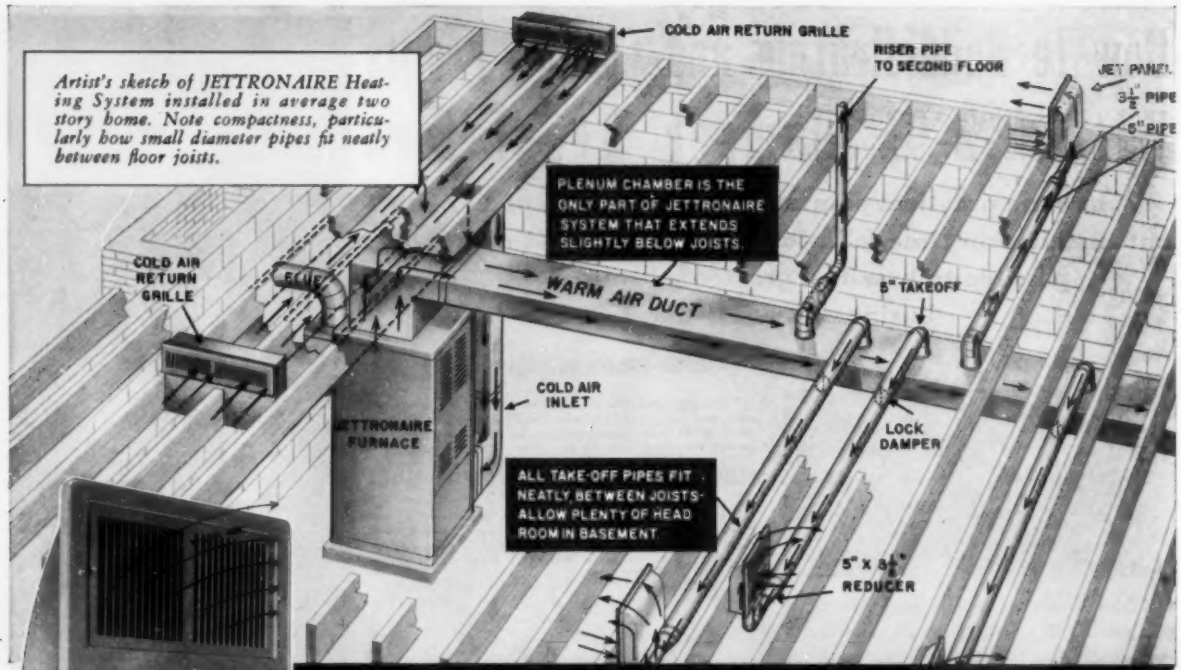
USE FINGERS or WRENCH

Fine S.A.E. type thread together with the large clamping surface on the wing nut assures positive damper locking.

E-Z-ONS . . . built for speed and profits

M. A. GERETT CORP.

724 WINNEBAGO STREET, MILWAUKEE 5, WIS.



Artist's sketch of JETTRONAIRE Heating System installed in average two story home. Note compactness, particularly how small diameter pipes fit neatly between floor joists.

YOU CAN SELL MORE—INSTALL MORE JETTRONAIRE SYSTEMS

WITHOUT EXTRA MEN OR SPECIAL TOOLS!

Completely automatic Jettronaire oil or gas heating systems are pre-engineered for modern controlled air circulation, comfort and economy!

"Packaged" units and minimum wall cutting (thanks to small diameter pipes) make it easy for you to make more money per Jettronaire job sold!

You can sell with confidence for commercial and residential installations this modern, *time-proved* heating system that eliminates objectionable drafts. Jettronaire heats more economically because it filters, cleans, circulates and re-circulates the warm air for individual room comfort.

The remarkable, neat-appearing, highly efficient 12"x13" "jet" panel that mixes clean, warm air from the furnace (about 65%) and room temperature air (about 35%) for most efficient heating.



Several models of Jettronaire Furnaces are equipped with built-in electronic air cleaners. Lo-Boy model above, has one side panel and front removed to show details.



Hi-Boy Jettronaire Furnace at right is space saver for homes, stores, offices, utility rooms and small basements.

Easy to install . . . economical for new construction or old

The 3½" diameter (at the panel) pipes employed by Jettronaire System fit neatly between studs. Simple roughing-in operation is all that's needed for Jettronaire's special "jet" wall panel. Investigate this marvelously efficient system today!

DEALERS and DISTRIBUTORS being considered

WRITE FOR DETAILS OF OUR EXCLUSIVE FRANCHISE

MANUFACTURED BY

JETTRONAIRE

INCORPORATED

1100 EAST WARRINGTON AVENUE

PITTSBURGH 10, PA.

AS MODERN AS TOMORROW'S HOMES!

American JETTRONAIRE HEATING SYSTEMS

All gas furnaces AGA approved, two-pass heat exchangers of 12 gauge steel, guaranteed for 10 years; oil burners U/L approved. 57,600 Btu to 152,000 output.



Standard is always first with the finest

here it is...
the floor register everyone wants!

STANDARD'S NEW

PERIMETER FLOOR REGISTER

with Standard's exclusive

Dialamatic Control

Standard's new, exclusive dialamatic control gives you POSITIVE HEAT CONTROL. The set screw arrangement means easy balancing, trouble-free operation!



SPECIFICATIONS

The blades of model PH-142 are fabricated of 16 gauge steel, the blades are set in a fixed-fan angle degree for even deflection. The Frame is of one piece, 18 gauge steel construction. The Louvre box fabricated of 16 gauge steel. Packed one to a box, and 20 to a master carton. Comes handsomely finished in gleaming, durable metallic-lustre finish.

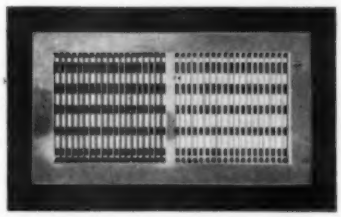
Duct opening	Overall of Louvre Box	Overall of Face	Open Area	Depth of Box
2¼" x 14"	2⅛" x 13¾"	3¾" x 15⅜"	80%	2⅛"

THE NEW, IMPROVED

multiple valve

REGISTER

Has Horizontal Multiple Valve Louvres, and 3/16" turned down edge for flush sidewall installation. The attached sponge rubber gaskets are an *extra* feature that prevents escape of air and chipping of wall surface. The Louvres are adjustable so that the flow of air may be directed either downward, straight forward, upward, or to complete shut-off.



MODEL NO. 331

Metallic Finish standard finish on this style

Write now for Standard's Free Pocket Catalogue



MEMBER NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION — INDOOR COMFORT

write now!



No cost or obligation to you

Standard Stamping and Perforating Co.
3151 West 49th Place—Chicago 32, Illinois

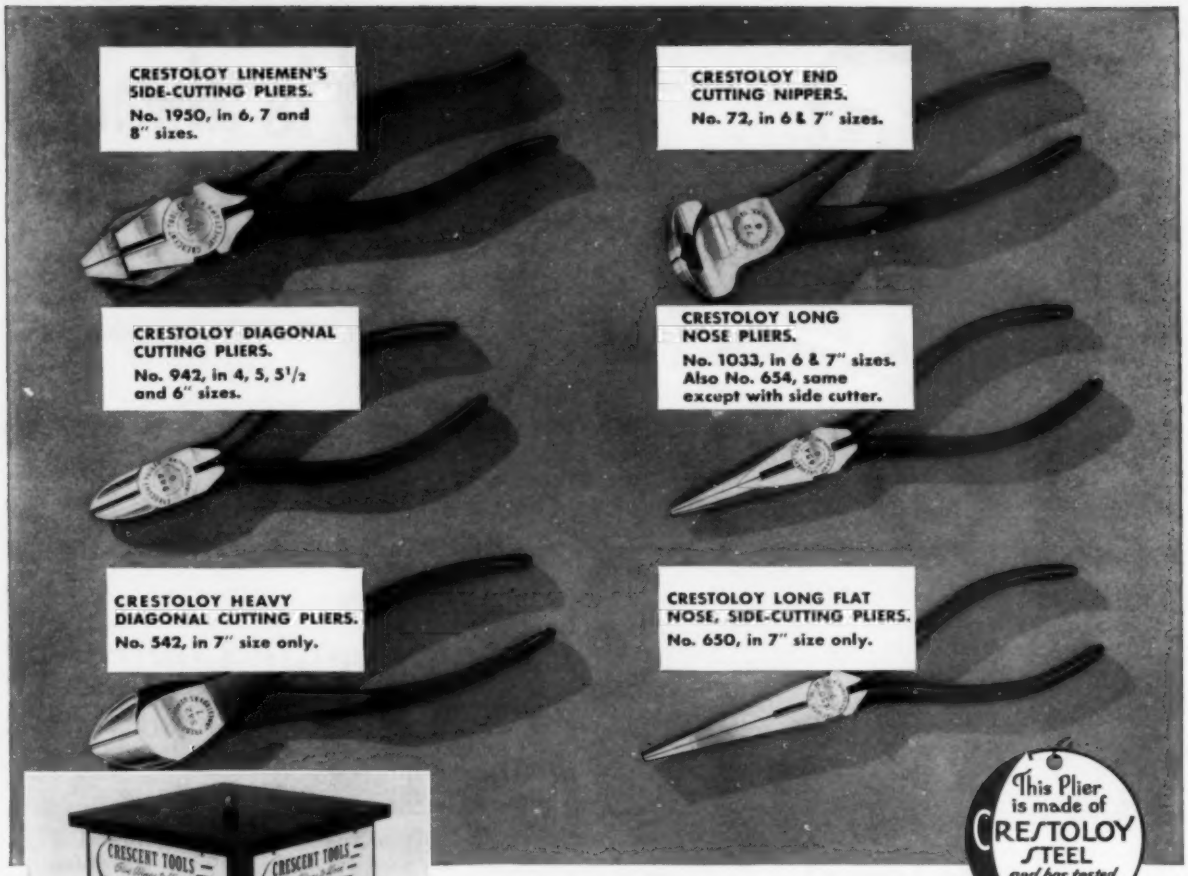
Standard Stamping and Perforating Co.
3151 West 49th Place—Chicago 32, Illinois

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NAME_____

ADDRESS_____ CITY_____ ZONE_____ STATE_____

COMPANY NAME





Your hardware dealer carries a wide selection of Crescent and Crestoloy Tools. You cannot buy finer tools at any price.

This Plier is made of CRESTOLOY STEEL and has tested 100% satisfactorily

CRESTOLOY PLIERS

are individually tested!

Crestoloy Pliers take all the guesswork out of plier buying, because Crescent has taken all the guesswork out of plier making. Rigid specifications establish the material, design, workmanship, tests and inspection of these better tools. Strict adherence to these specifications is maintained by continuous tests and relentless inspection of the *individual* tools. Every plier carries the Crestoloy tag certifying that it has been individually tested.

CRESCENT TOOLS
Give Wings to Work
®
Sign of the Artisan
Symbol of Excellence



Crescent is our trade-mark, registered in the United States and abroad, for wrenches and other tools. Sold by leading distributors and retailers everywhere and made only by

CRESCENT TOOL COMPANY, JAMESTOWN, NEW YORK



300,000 SQUARE FEET...

DEVOTED TO THE PRODUCTION OF PREFABRICATED FURNACE FITTINGS, GRILLES, HUMIDIFIERS, RAIN GOODS

YOUR ASSURANCE OF QUALITY AND SERVICE

We're proud that under one roof, we can devote 300,000 square feet of floor area to providing better service for our customers. To you it can mean truckload discounts without large inventories, savings in time and money when figuring costs, savings in space, and, above all, a complete line of well-engineered registers, fittings, humidifiers and rain goods.

YOUR CHOICE OF GALVANIZED OR ALUMINUM

Char-Gale fittings are currently being produced in *both galvanized and aluminum, in quantities to suit your needs.*

YOUR PROOF OF CHAR-GALE FORESIGHT

First in the production of forced air prefabricated ducts.
First in the use of aluminum for ducts and fittings.
First in the packaging and cartoning of fittings.
First in the development of project packs (job for job).
First in the development of the 4-inch pipe system.
First to design the increased capacity 4½-inch system.

YOUR BEST SOURCE OF

- ★ Aluminum Fittings
- ★ Aluminum Pipe and Elbows
- ★ Aluminum Sheets
- ★ Galvanized Fittings
- ★ Galvanized Pipe and Elbows
- ★ Galvanized Sheets
- ★ Complete Small Pipe Systems; both Aluminum and Galvanized
- ★ Humidifiers
- ★ Rain Goods
- ★ Registers—Complete Line, both Perimeter and Conventional including Floor Diffusers

For Information and Catalogs, Contact Your Jobber or Write Direct to

CHAR-GALE MANUFACTURING CO.

ANOKA, MINNESOTA

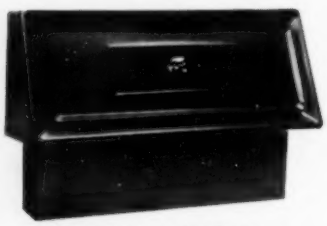
CHAR-GALE THE COMPLETE LINE OF

SMALL PIPE REGISTERS FOR HEATING AND COOLING



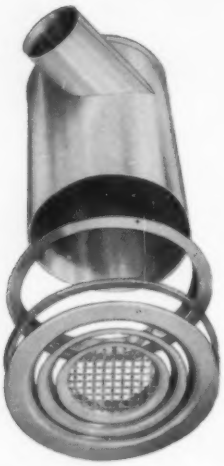
"GALE-AIRE" SIDEWALL REGISTER

The "Gale-Aire" Sidewall Register distributes air evenly in all directions along the wall. Adjustable, it permits complete balancing at the registers. Complete with register, box and foam rubber gasket.



"GALE-AIRE" BASEBOARD REGISTER

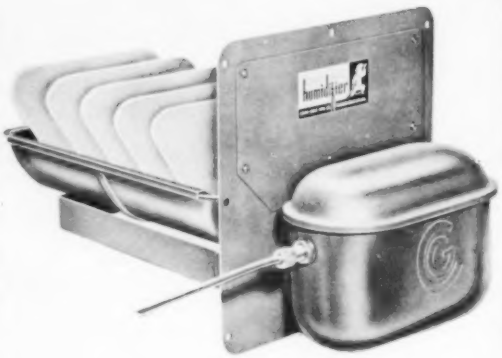
Including all the features of the Sidewall Register, the "Gale-Aire" Angle Baseboard Register is designed especially for older homes. It is installed through a floor opening, with no wall cuts needed.



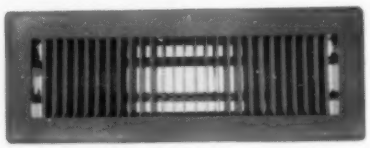
"GALE-AIRE" CEILING DIFFUSER

Newest Char-Gale register, the "Gale-Aire" Ceiling Diffuser is designed to provide effective air tempering and distribution. The unit includes a cylindrical box, fitting ring, foam rubber gasket, and register.

HUMIDIFIERS



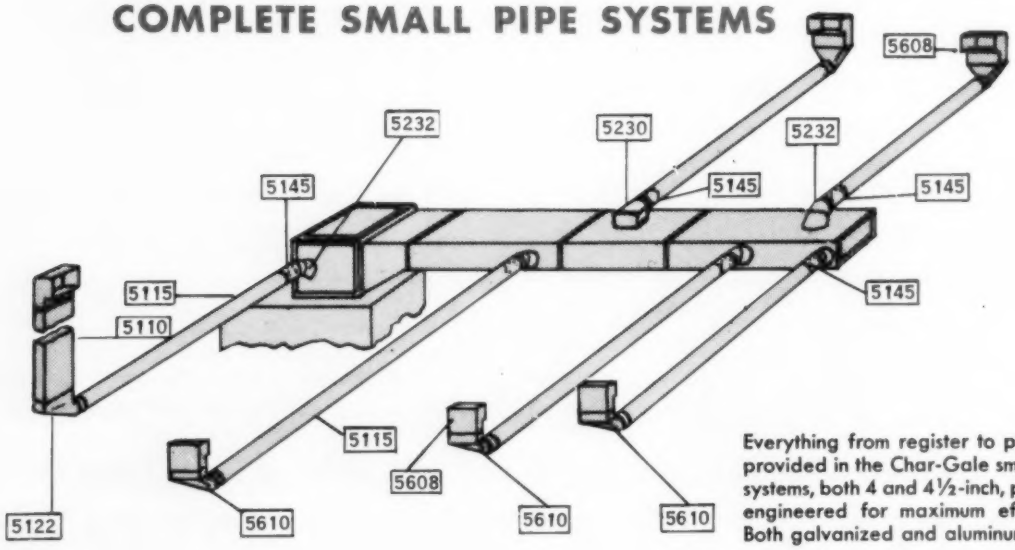
This product, completely engineered by Char-Gale, comes in either the open pan design or with "Activapor" plates and rack. Both models are automatically controlled by Char-Gale's patented Snap Action Valve.



"GALE-AIRE" FLOOR DIFFUSER

Answers the need for an inexpensive method of distributing air along outside walls. Vanes set at proper angles to achieve a fan-shaped diffusion pattern.

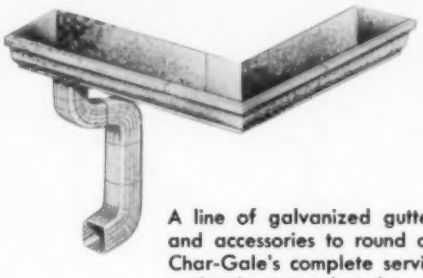
COMPLETE SMALL PIPE SYSTEMS



Everything from register to plenum is provided in the Char-Gale small pipe systems, both 4 and 4½-inch, properly engineered for maximum efficiency. Both galvanized and aluminum.

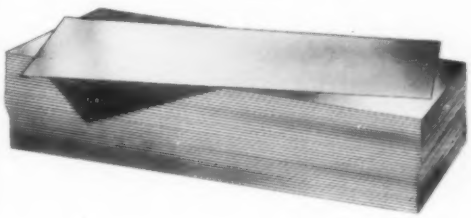
REGISTERS, FITTINGS AND RAIN GOODS

RAIN GOODS



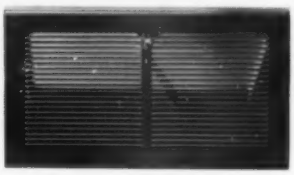
A line of galvanized gutters and accessories to round out Char-Gale's complete service to the sheet metal trade.

ALUMINUM AND GALVANIZED SHEETS

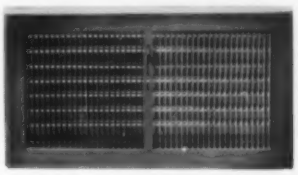


Stocks available for immediate shipment. Price lists mailed on request.

CONVENTIONAL REGISTERS



Style 400 Single Valve Baseboard Register also available in a sidewall model.



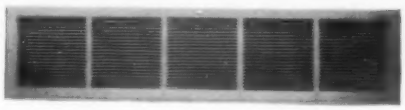
Style 402 Multiple Vane Baseboard Register also available in a sidewall model.



Style 403 Single Valve Out-of-Wall Register.

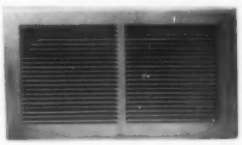


Style 418 Return Air Out-of-Wall Register.



Style 415 Return Air Baseboard Vent (Long).

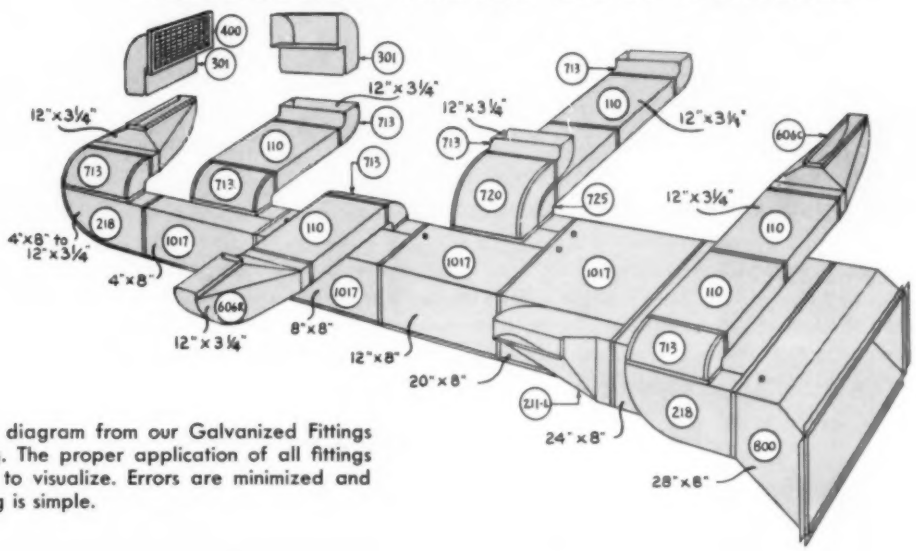
Style 420 Return Air Sidewall Vent (Long).



Style 415 Return Air Baseboard Vent.

Style 420 Return Air Sidewall Vent.

GRADUATED TRUNK DUCT SYSTEMS

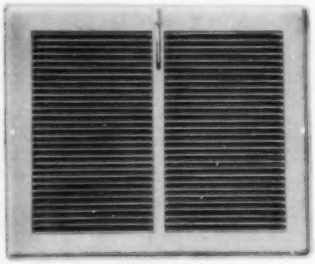


Sample diagram from our Galvanized Fittings Catalog. The proper application of all fittings is easy to visualize. Errors are minimized and ordering is simple.

The Right Register FOR YOUR GRAVITY SYSTEM



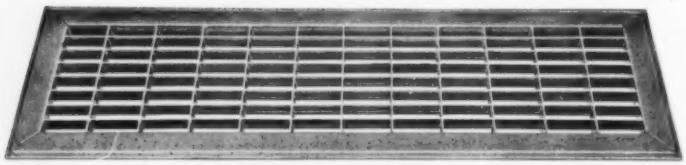
Style 810, 812, 912, 1113
Baseboard Register.



Style 807 and 808 "Wafer"
Sidewall Register.



Floor Register.



Steel Face Return Air Floor Register.

Quick Service!

TO ALL POINTS—ANYWHERE



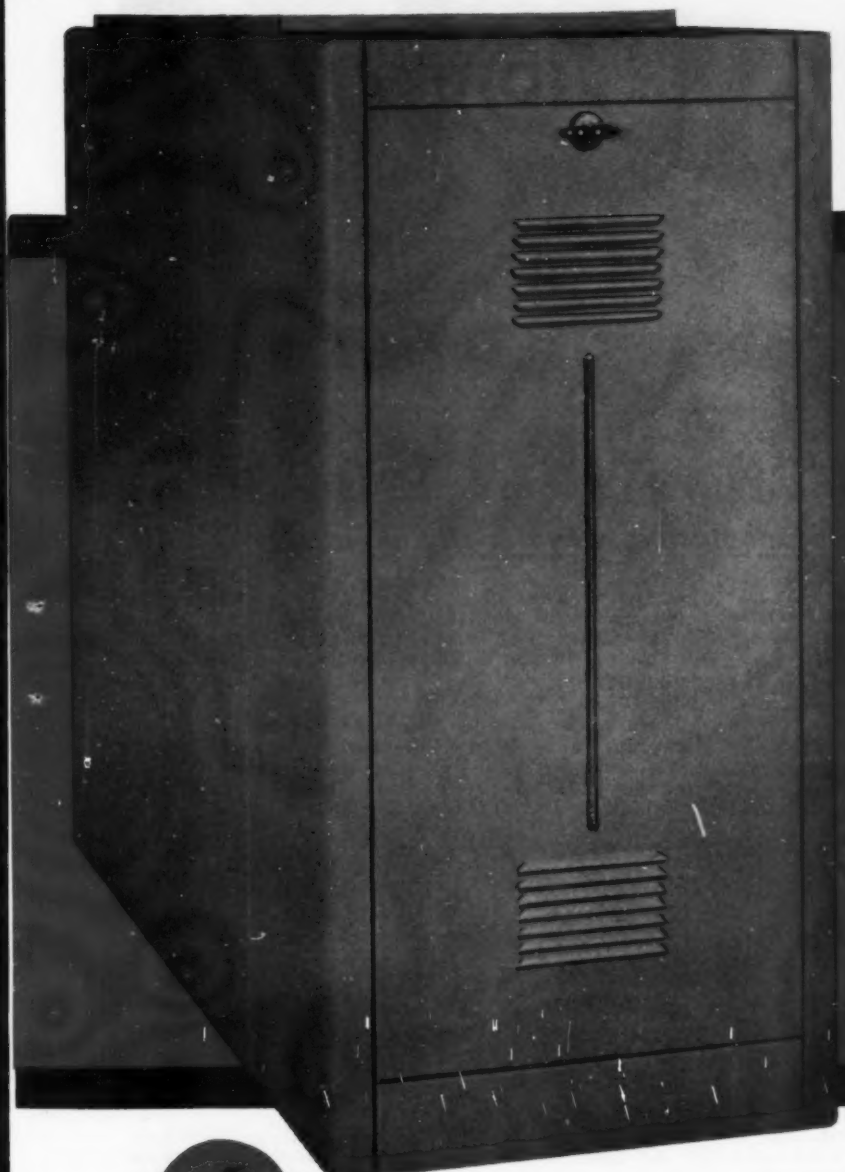
Char-Gale's own fleet of trucks can make a big difference in your profit picture. *Every item in a mixed truckload gets the same liberal truckload discount that would be available with a uniform truckload.* And while you save on shipping costs, you keep your inventory down, which means increased dollar efficiency. Then, too, the Char-Gale truck fleet assures you of fast delivery in flawless condition, right to your door.

Contact your jobber or write us direct

CHAR-GALE *MANUFACTURING CO.*
ANOKA, MINNESOTA

MAYFLOWER

...the center of attraction!



MAYFLOWER'S beautiful, rugged 1954 line offers extra features vital to success in today's market—

Exclusive franchise assures the territory protection that builds reputation and profits.

Ease of installation—a major factor in cost reduction.

Economical operation and freedom from service calls, build goodwill and additional sales.

MAYFLOWER

AIR-CONDITIONERS, INC.

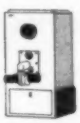
SAINT PAUL 6, MINNESOTA



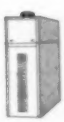
GAS



COAL



OIL



MAYFLOWER AIR-CONDITIONERS, INC.
St. Paul 6, Minnesota

Send me complete information on the great 1954 line of Mayflower Warm Air Heating Equipment

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New 1954 Chevrolet Trucks

New Power! New Economy! New Features you want!

New Chevrolet trucks for '54 are here to do your hauling or delivery job faster, more efficiently and more economically.

To begin with, they bring you thrifty new power in *all* models. You save time on every trip with extra reserves of high-compression horsepower under the hood—and you enjoy greatly increased operating economy as well.

In addition, these great new Chevrolet trucks offer new and even greater dependability with increased ruggedness throughout the chassis. You'll find heavier axle shafts in 2-ton models . . . bigger, more durable clutches in light- and heavy-duty models . . . more rigid frames in *all* models. Pickup and stake bodies are plenty rugged, too—and they're roomier for '54!

But that's only the beginning! You enjoy new cab comfort, convenience and safety. Instruments are easier to read . . . controls are easier to reach. A new one-piece curved windshield gives you greater visibility. The new Ride Control Seat* lets you drive in relaxed comfort hour after hour, over all kinds of roads. Seat cushion and back move as a unit to "float" you over bumps without back-rubbing.

In another great advance, new Chevrolet trucks offer you the last word in no-shift driving ease and convenience. With proved truck Hydra-Matic transmission* you can drive all day and make door-to-door deliveries without shifting or clutching. Fact is, there *is* no clutch!

These are some of the many big new benefits awaiting you in the new Chevrolet trucks for '54. Why not plan to get the whole money-saving story at your Chevrolet dealer's soon! . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!

CHEVROLET

ADVANCE-DESIGN TRUCKS

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

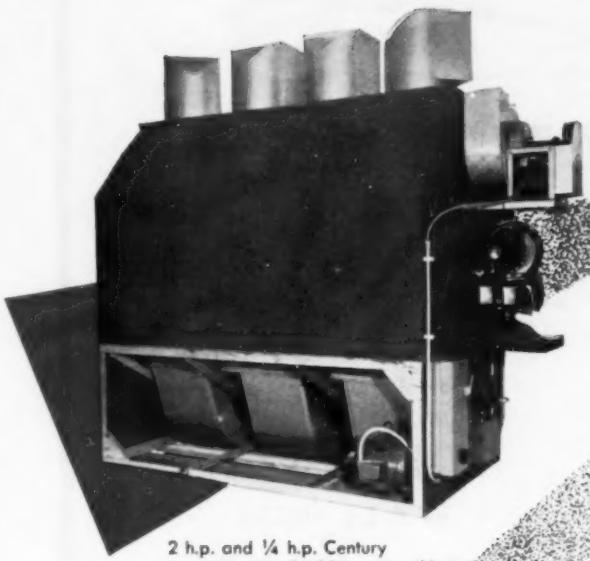
THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates back-rubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance. *Optional at extra cost. Ride Control Seat is available on all cab models, "Jobmaster 261" engine on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.

MORE CHEVROLET TRUCKS IN USE THAN ANY OTHER MAKE!

FOR PERFORMANCE YOU'LL BE PROUD OF...

Century MOTORS

PAY OFF IN PLEASED CUSTOMERS



2 h.p. and ¼ h.p. Century motors power the blowers on this popular, direct-fired unit heater for commercial and industrial installation.



Even years after you've made a Century motor-powered installation you'll continue to win praise from your customers for its quiet running and efficient operation.

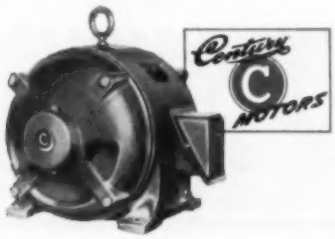
Leading manufacturers of heating, ventilating and air conditioning equipment choose Century motors to bring out the best performance in their products. The wide range of Century motor sizes and types enables them to select exactly the right motor design and torque characteristics to do the job best.

For help with your motor problems—replacement or new applications—consult the Century Branch Office nearest you, or conveniently located Century distributor. A nationwide network of Century Service Stations is always at your service to help you keep your customers happy.



Two Century Motors installed on an Air Conditioning and Heating System in an office building.

400 TO 1/8 HORSEPOWER



CENTURY ELECTRIC COMPANY
1806 Pine Street • St. Louis 3, Missouri
Offices and Stock Points in Principal Cities

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ABSOLUTELY!

THE FINEST WALL BASE HEATING

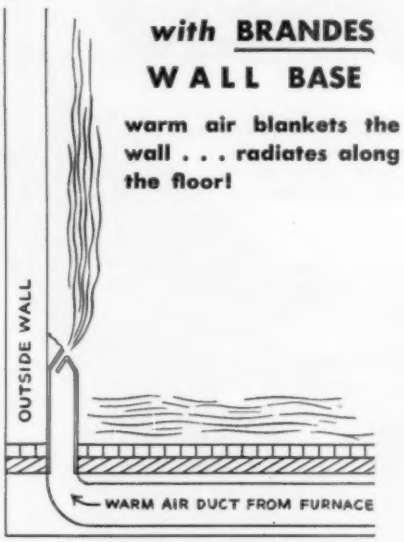
BRANDES

*IT'S PATENTED

*THE FIRST, AND FINEST

*EXPERIMENTS ARE OVER, IT'S PROVED!

*LOW COST, LOW INSTALLATION



with **BRANDES**
WALL BASE

warm air blankets the wall . . . radiates along the floor!

Write:

THE BRANDES COMPANY

2046 WINNEBAGO ST., MADISON 4, WISCONSIN

"THE FACTS, SIR! *ALL* THE FACTS!"



"MY NAME IS GEORGE, ST. GEORGE. I'm a dragon killer. I was down at headquarters, when I got the call at 4:08. It was a 409—a 'draft-dodging' dragon. He was reported puffing and sooting without a license. I sent out a 410 and 411.

"At 4:12, I was covering the neighborhood and saw the criminal.

"Pardon me, Sir, may I ask you a few questions, Sir? I just want to get the facts, Sir, just the facts.

"Why are you puffing, sooting and smoking?

"Is your chimney too short? Too long? Too wet? Too cold? What are the angles? No draft?

"I got the facts and at 4:13 I installed QUICKDRAFT in his smoke pipe.

"He's been going straight ever since."

quickdraft...

1. Keeps smoke-pipe and chimney dry on gas-fired equipment
2. Eliminates chattering, sooting and oil film from oil-burning equipment
3. Stops smoking, puffing and clogging on coal furnaces
4. Makes short chimneys draw
5. Immediately establishes necessary draft in cold, outside chimneys
6. Provides proper draft in smoke pipes with long runs and els, and in chimneys with angles
7. Keeps fire-places from smoking up the house
8. Safely vents incinerator, furnace and water heater into same flue.

use quickdraft



Patent Pending

NEW! AUTOMATIC!

draft creator

- Designed to prevent draft troubles on new construction . . . to correct draft troubles on modernization work. Easily installed.
- An automatically controlled unit—always on guard—creates perfect draft under all conditions.

IMMEDIATE DELIVERY
All standard sizes.
(6 to 10 inches dia.)

Write or wire for Installation Manual, literature and prices.

quickdraft
COMPANY
DIVISION OF THE HALL'S SAFE COMPANY, INC.

1640-D Cleveland Ave., Canton 3, Ohio

Mueller Climatrol

helps you

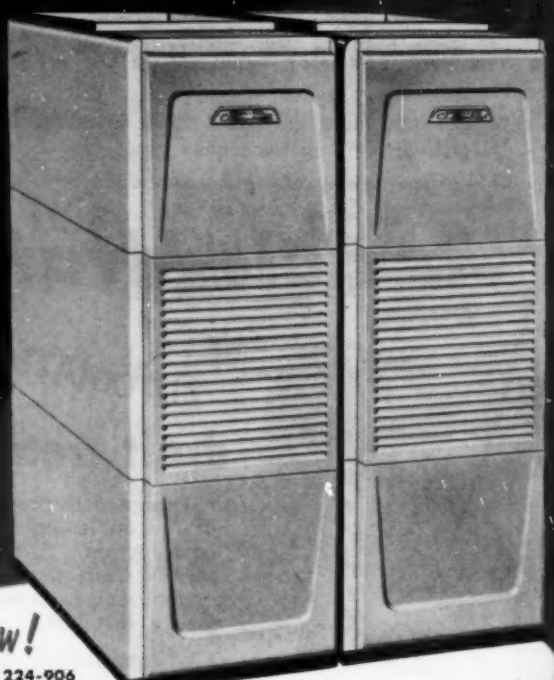
sell more in fifty-four!

with

NEW PRODUCTS!
to give you more sales opportunities.

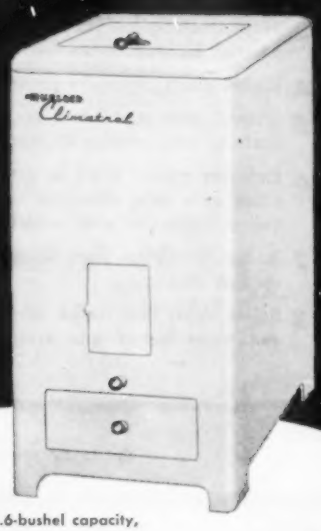
NEW STYLING!
by world-famous industrial designer, Brooks Stevens.

NEW FINISH
a smooth finish in a new color — Mountain Spring Green, a shade that blends attractively with any color scheme.



New!

Type 224-906 Companion Units
for all-season air-conditioning. The Type 224 is gas or oil in 80,000, 100,000, 120,000 and 150,000 Btu input.



New!

Incinerator
Electric or gas. 1.6-bushel capacity, low input.

D-157



New!
Type 115-905 Counterflow Summer and Winter Air Conditioner
Heating and cooling for perimeter systems.



New!
Dehumidifier
Attractively styled, efficient. Portable, plugs in anywhere.



New!
Type 160 Gas-fired Unit Heater
Seven sizes from 50,000-225,000 Btu input. Enclosed controls and diverter.

Mueller Climatrol gives you the industry's most complete line...

Gas and oil boilers . . . winter air conditioners for gas, oil, coal . . . highboys, lowboys . . . counterflows . . . horizontal (attic) . . . steel gravity furnaces for all fuels . . . gas and oil unit heaters . . . gas and oil conversion burners . . . humidifiers . . . blower-filter units . . . furnace pipe, duct, and fittings . . . Muelleraire Small-Pipe Fittings . . . perimeter fittings . . . filters . . . registers and grilles . . . controls . . . residential and commercial cooling equipment.

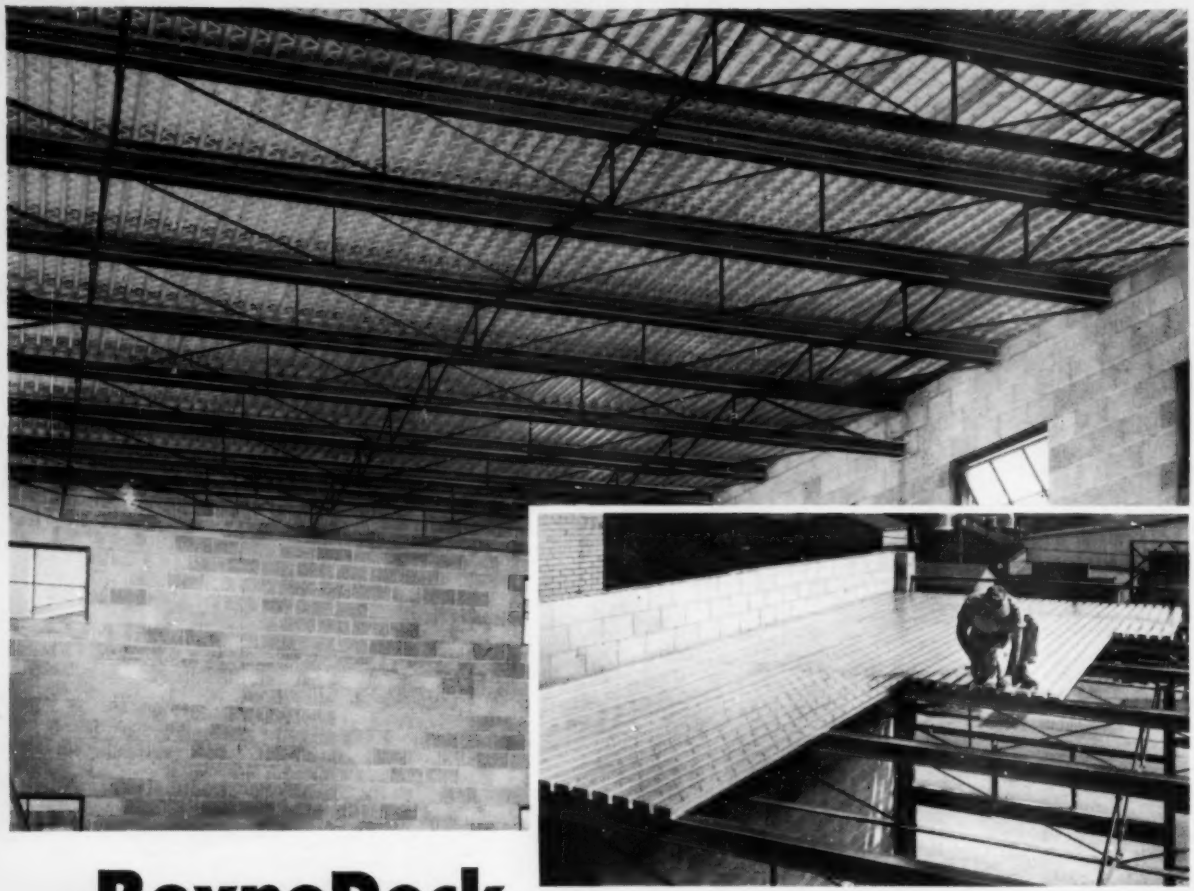
—plus powerful advertising . . . hard-hitting dealer sales-helps . . . effective sales counsel

Tie up with Mueller Climatrol, the Big Name in Heating and Cooling, to enjoy a big edge on competition — and make more sales and profits. Write for details.

97th Anniversary

Mueller Climatrol

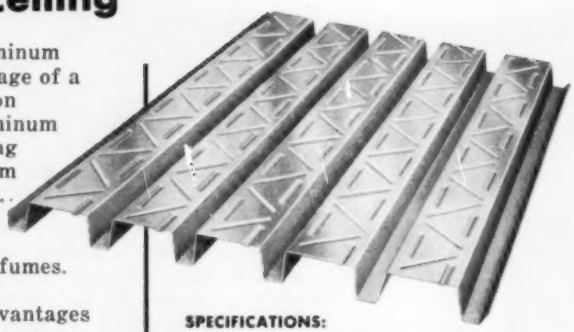
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Milwaukee 15, Wisconsin



ReynoDeck

aluminum roof deck makes a maintenance-free ceiling

In any construction where roof deck is used, aluminum **ReynoDeck** offers the primary cost-saving advantage of a maintenance-free ceiling... plus easier installation and a higher insulation value. The rustproof aluminum underside requires no painting... a periodic saving that can pay for the deck in 20 years. The aluminum reflects heat... saves winter fuel. It reflects light... looks modern. It has high corrosion-resistance ...making **ReynoDeck** especially suited to many conditions involving high humidity and industrial fumes. Meets the exacting requirements of the metal roof deck industry with the cost-saving installation advantages of lighter weight and greater width per unit than any other standard metal deck. Write for literature.



SPECIFICATIONS:

Thickness: .032" (No. 20 B&S Gauge) and .036" (No. 19 B&S Gauge).

Width: Overall 25"; nominal coverage 24" with 1 rib side lap.

Ribs: 1.75" deep, spaced 4.8" center to center.

Weight: .81 lbs. per sq. ft. for .032; .91 lbs. per sq. ft. for .036.

A complete installation service is available. For name of nearest franchised jobber-erector, call the Reynolds office listed under "Building Materials" in classified phone books of principal cities. Or write to Reynolds Metals Company, Building Products Division, 2046 S. Ninth St., Louisville 1, Ky.

SEE "MISTER PEEPERS," starring Wally Cox, Sundays, NBC-TV Network.

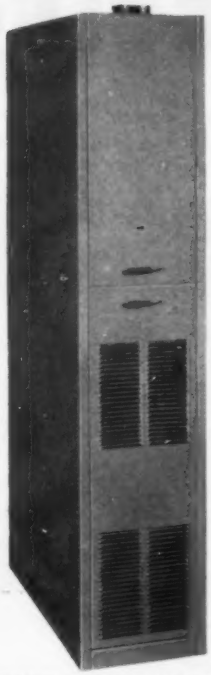
REYNOLDS ALUMINUM

BUILDING PRODUCTS

the new COZY COUNTERFLOW OR UPFLOW FORCED AIR FURNACES

are *"tailor made"* for your market





tailored for **more** *profit*
tailored with **more** *features*
tailored with **more** *quality*

check these features . . .

• Approved for "Zero" clearance installation. • Approved for use with 4" duct work. • Approved for use with ALL types of gas.

• Same BTU rating on natural, mixed, manufactured, and LP gases. • Available in either upflow or counterflow models.

• Factory wired, assembled and live-tested – ready to install.

• Accessible – entire Cozy unit may be serviced from front after installation. • Ten-year guarantee on exclusive "Curvic" 16-gauge steel heat exchanger. • Cozy Fan Flame Burner – thin, blue, fan-shaped flame readily absorbs oxygen from all sides for complete combustion. • Wide choice of automatic controls.

• 100% safety pilot on all 24-volt controls. • Competitively priced – highest quality allows you to outsell competition.

MODEL 201-75 COUNTER FLOW blankets cold, outside walls and windows with warm air, checks cold entry. May be installed on combustible floors. No built-up foundation–less installation cost.

MODEL 200-75 UPFLOW can be installed in any out-of-the-way location. It requires only 14"x28" of floor space. Input rating 75,000 BTU/hr. Direct or belted drive. Cozy air insulated wall keeps heat loss to a minimum.

(105,000 BTU and 140,000 BTU MODELS AVAILABLE)

COZY WALL FURNACE

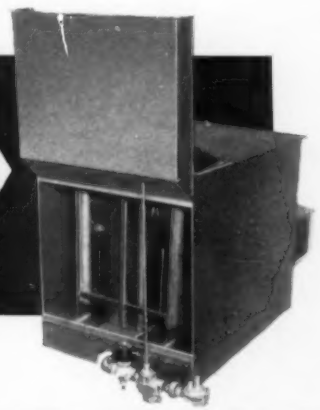
Gives both circulated and radiated warmth. A heavy, corrugated heating unit, ruggedly made and welded gas tight, is designed for lifetime service. Cast-iron slotted type burner produces the famous Cozy Fan Flame for maximum combustion efficiency.



Plus the COZY CHALLENGER

NEWLY DESIGNED SLIDING END PANEL MAKES CONTROLS ACCESSIBLE FROM ABOVE

The best buy in the floor furnace field. Its new design makes all controls accessible by removing grille and end panel. Sales-producing features are: Heavy-gauge steel heat exchanger – Heavy-duty, unbreakable steel grille – Shallow design outside casing – Removeable inner jacket – Ten-year warranty – Complete range of sizes – AGA approved.



ASK YOUR DISTRIBUTOR ABOUT OUR SEPTEMBER 1 DATING PLAN . . . OR WRITE DIRECT

Learn how you can profit from our sale-producing "dating" plan and high-profit "contracting" sales plan.

COZY
THE ADVANCE FURNACE COMPANY
WICHITA, KANSAS

Only Automatic DRIP FEED GIVES

Built-in thermostat drip-feeds measured amounts of water to *sizzling hot* pan. *Each drop vaporizes* as it strikes pan. Gives home measured vaporization, preselected to meet the individual needs of each family.

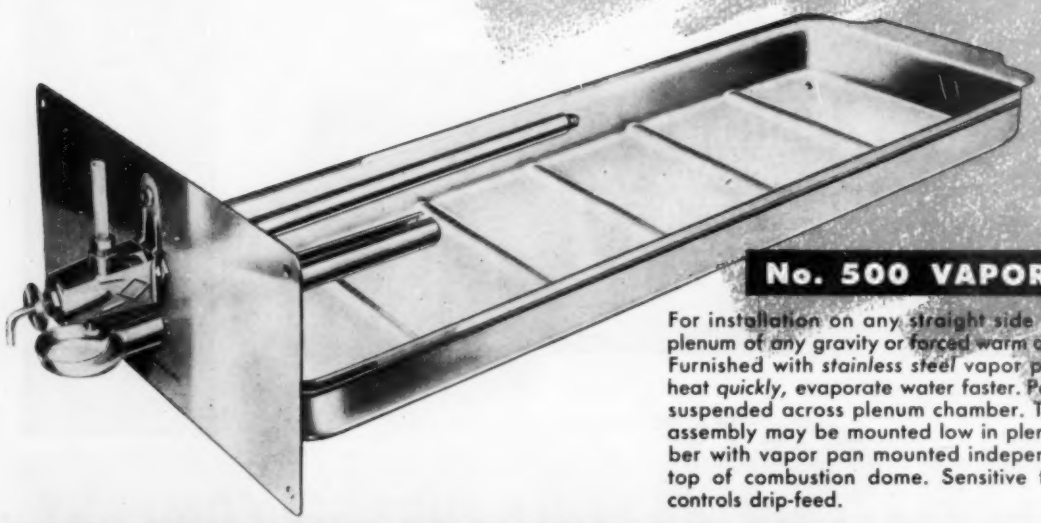
Thermostat *automatically* shuts water off when heat goes down. This *completely eliminates* the old-fashioned method of reheating a pool of cold water in humidifier.

AUTOMATIC HUMIDIFIERS are noted for their *greater efficiency, better performance, lower cost.* Get facts on the *complete* AUTOMATIC line. Write for new free catalog.



THERMO-DRIP

For installation on straight side bonnet or plenum of *any* warm air furnace. Fully adjustable. Automatic drip-feed controls vaporization. No stagnant pool to reheat. Valves *do not* lime up. Outside screw adjuster. Stainless steel pans.



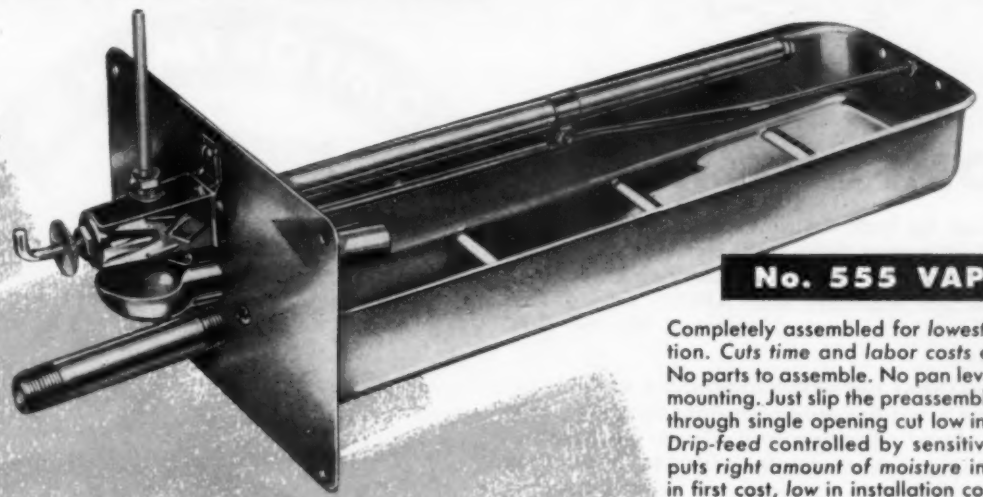
No. 500 VAPORITE

For installation on any straight side bonnet or plenum of any gravity or forced warm air furnace. Furnished with *stainless steel* vapor pans which heat *quickly*, evaporate water faster. Pan is easily suspended across plenum chamber. Thermostat assembly may be mounted low in plenum chamber with vapor pan mounted independently on top of combustion dome. Sensitive thermostat controls drip-feed.

AUTOMATIC HUMIDIFIER

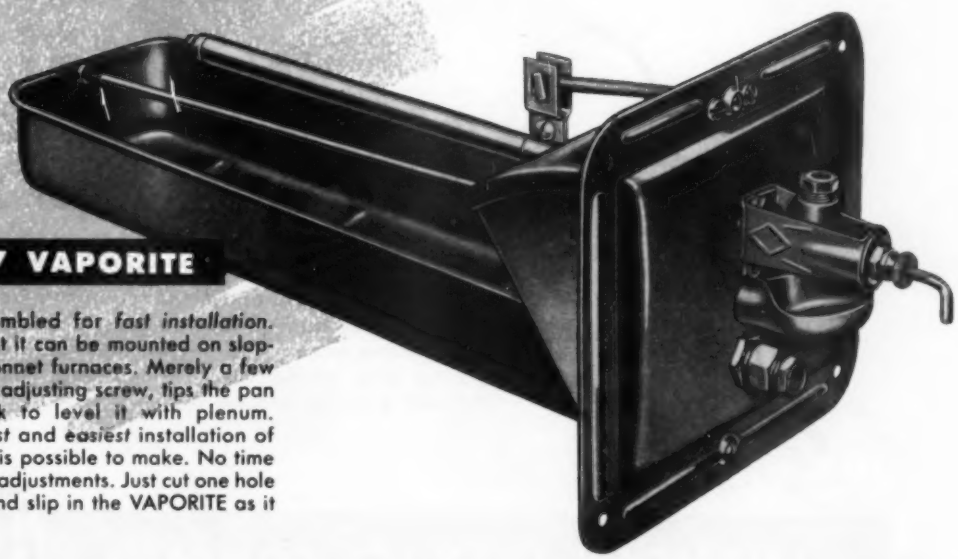
Humidifier's

CONTROLLED HUMIDITY



No. 555 VAPORITE

Completely assembled for *lowest cost* installation. *Cuts time* and *labor costs* on *every* job. No parts to assemble. No pan leveling or tricky mounting. Just slip the preassembled VAPORITE through single opening cut low in plenum wall. *Drip-feed* controlled by sensitive thermostat puts *right amount of moisture* in the air. *Low* in first cost, *low* in installation cost.



No. 577 VAPORITE

Completely assembled for *fast installation.* Adjustable so that it can be mounted on sloping or straight bonnet furnaces. Merely a few turns of the pitch adjusting screw, tips the pan forward or back to level it with plenum. Positively *quickest* and *easiest* installation of humidifier that it is possible to make. No time or labor wasting adjustments. Just cut one hole in plenum wall and slip in the VAPORITE as it is shipped.

COMPANY • CEDAR FALLS, IOWA



Every Month a Profit Month with the AFCO Comfortmaker

AFCO Combination Heating and Cooling Has Year Around Sales Appeal!

Now learn the facts about year around air conditioning — eliminate slow seasons from your business — Add Sales and Profit

THE 3-WAY COMFORTMAKER

Designed for both the new construction and remodeling market, these units combine a properly balanced sealed cooling unit carrying a five year replacement warranty with AFCO's famous extended surface heat exchanger Master Gas Furnace.

Three sections are easily assembled as a single package requiring minimum floor space — only 27" x 41½". Cooling and blower sections or the cooling section may be added to an existing heating system to provide year around heating and cooling.

Inquire about AFCO's complete line of Sound Value Heating and Cooling Equipment and Franchised Territorial Agreement.





— Sell AFCO —

The Complete Comfortizing Line ...
A Dependable Source of Supply

Over eighty models and sizes to choose from — automatic gas and oil fired heating units — coal fired heating units — oil or gas fired combination heating and cooling units — cooling units for use with existing heating systems.

AMERICAN FURNACE COMPANY
1300 HAMPTON AVENUE • ST. LOUIS 10, MO.

AFCO SINCE 1900

Wherever You Need BURNERS of BETTER QUALITY for BETTER PERFORMANCE

CHOOSE SUN-RAY

Way ahead with extra values

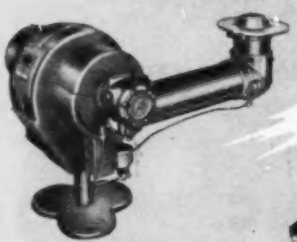
FOR EVERY HEATING NEED FROM 0.5 TO 25 G.P.H.

*Model S Burner with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 0.7 to 2 g.p.h.





*Model S-1, with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 2 to 3 g.p.h. Model S-2, 3 to 6 g.p.h.



*Model VS (Vertical Flame), with special aerodynamically designed housing for famous fuel saving "Shell" Combustion Head; 0.7 to 2 g.p.h. Model VS-1, 2 to 3 g.p.h.

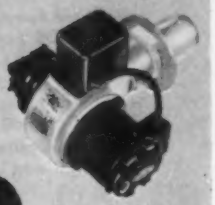
*Delayed action oil valve mounted and wired. Available on other models as an extra. Built-in electronic controls optional on all models.

SUN-RAY
FULLY AUTOMATIC
OIL BURNERS
FAMOUS THE WORLD OVER FOR QUALITY AND ECONOMY



Model 1C-A-E
0.5 to 1.35 g.p.h.
Model 1C-A
0.75 to 2 g.p.h.

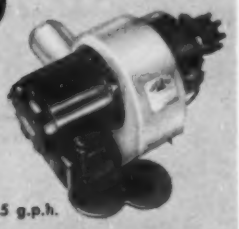
Model 1C-B
1.5 to 3.5 g.p.h.



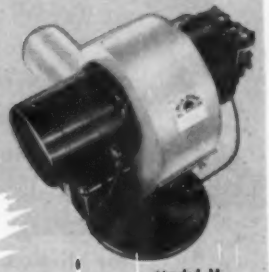
Flanged Models for all requirements.



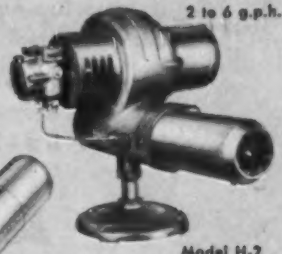
*Model 1C-6
3 to 6.5 g.p.h.



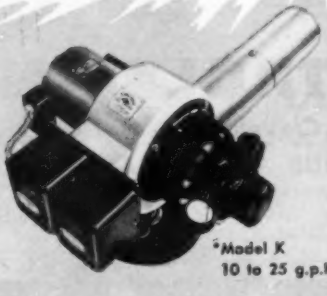
Model G
0.75 to 2.5 g.p.h.



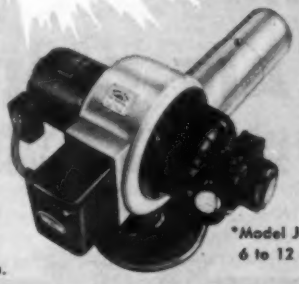
Model H
2 to 6 g.p.h.



Model H-2
5 to 8 g.p.h



*Model K
10 to 25 g.p.h.



*Model J
6 to 12 g.p.h.

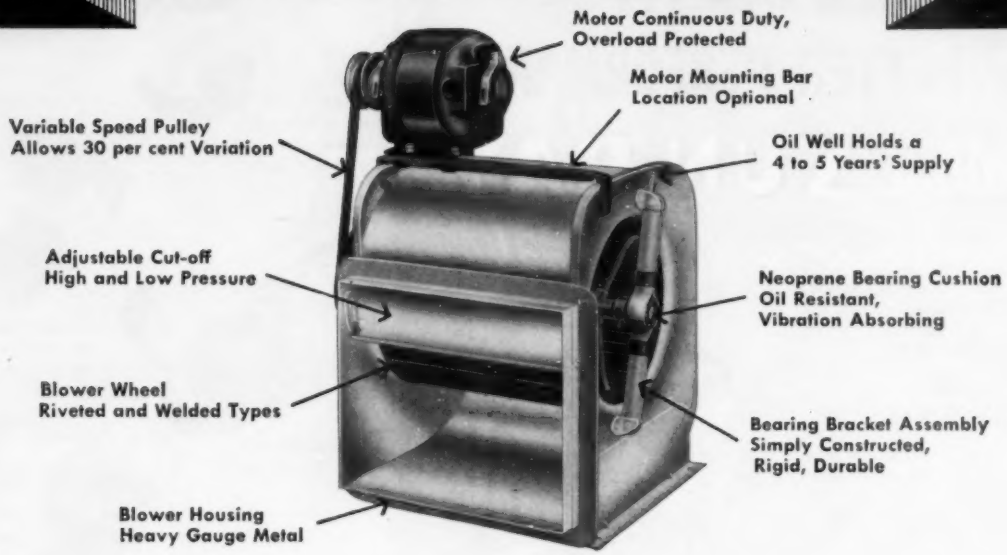
OHI

Inquiries invited from boiler and furnace manufacturers

SUN-RAY BURNER MANUFACTURING CORPORATION

139-34 Queens Boulevard, Jamaica 2, New York

Here's Why You Should Incorporate Rex SQAIR Blowers in Your Product!



• Dollar for dollar—in price and performance—you can't buy a better blower than the Rex SQAIR. In design, engineering and quality—for more than forty-five years—Rex SQAIR blower assemblies have met the exacting requirements of America's leading manufacturers of heating and air conditioning equipment.

There's a special Rex SQAIR blower assembly tailor-made to solve difficult forced air problems.

Manufacturers who make several types of equipment and require more than one type of discharge, will find that the Rex SQAIR meets their needs perfectly. The Rex SQAIR line eliminates costly inventories by providing four distinct discharges in one! Contractors, too, find Rex SQAIR the most flexible, most rugged blower to solve their air conditioning, heating and ventilating air handling problems.

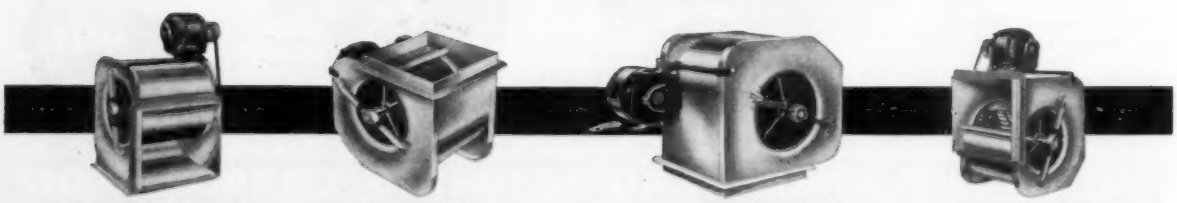
For quiet operation, long life and trouble-free service—the Rex SQAIR line is tops!

Write today for the new catalog on the complete line.

AIR CONTROLS, INC.

Division of the Cleveland Heater Co.

2310 SUPERIOR AVENUE • CLEVELAND 14, OHIO



Bottom Horizontal | Up-Blast Discharge | Down-Blast Discharge | Top Horizontal



Thatcher

OFFERS YOU A
COMPLETE WARM AIR
HEATING LINE ***PLUS...***
CENTRAL COOLING UNITS
...FOR BOTH THE REPLACEMENT AND
NEW CONSTRUCTION MARKETS ***PLUS...***
A CONSUMER
ACCEPTANCE BASED
ON A 104 YEAR
REPUTATION FOR
QUALITY.



...AND HERE'S THE VERY NEWEST—



THE 532 SERIES
HORIZONTAL
OIL-FIRED
WINTER AIR CONDITIONER

Three sizes • B.T.U. at bonnet 82,500, 115,000 and 165,000 • B.T.U. at register 70,000, 100,000 and 140,000 • Completely factory assembled • Compact • Can be suspended from ceiling joists or installed in crawl space or attic.

Write for free 4 page folder on this new unit today!

THATCHER FURNACE COMPANY

GARWOOD, NEW JERSEY

AIR CONDITIONERS • FURNACES • GAS BURNERS • OIL BURNERS • BOILERS

SALES AMMUNITION!

A FURNACE YOU'LL WANT TO TALK ABOUT!



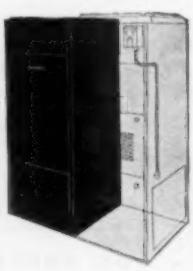
Perfection with Regulaire*

the only real exclusive in the heating business

REGULAIRE is the "blower of 1000 speeds" that regulates air flow to the exact amount of warmth coming from the furnace. No cold blasts . . . no sudden surges of hot air. Regulaire is the one feature that every furnace manufacturer would love to have but *only Perfection can offer*. And it's the *one* feature that really helps you clinch the sale when you're bidding on a heating job. Vital for perimeter heating, too. If you want to *sell more* heating equipment—without cut rate competition—you're on your way when you handle Perfection! Write Perfection Stove Company, 7507-A Platt Avenue, Cleveland, Ohio.

*Pat. pending

Companion Unit for Complete Home Air Conditioning. Gives you the opportunity to "sell up" with prospects who are interested in air conditioning as well as heating.



YOUR HOME DESERVES

Perfection



PORTABLE HEATERS



FURNACES • HOME HEATERS • RANGES • AIR CONDITIONERS • WATER HEATERS

CS—39

Mr. Furnace Manufacturer:

...NOW

YOU CAN SELL YEAR-AROUND COMFORT

WINTER Air Conditioning AND SUMMER Air Conditioning

YOUR HEATING UNIT PLUS Tecumseh HERMETIC



When designing your furnace to include summer cooling for a true year-around air conditioning system, consider the advantages of a completely sealed Tecumseh hermetic compressor. The 3 H.P. Tecumseh hermetically-sealed compressor is designed primarily for use in year-around systems. This compressor will help your engineers to design the most dependable and efficient year-around air conditioning unit at the lowest possible price.

Yes, these new Tecumseh hermetics are the only compressors in the refrigeration industry today that offer so much for so little. Over 14 million Tecumseh hermetics now in the field attest to the acceptance of the Tecumseh hermetic. That is why furnace manufacturers are specifying Tecumseh in their new cooling units. And that is why it will more than pay you to investigate Tecumseh right now by writing us for complete details.

Remember, you can't go wrong when you specify the best—Tecumseh.

TECUMSEH

TECUMSEH PRODUCTS Company

TECUMSEH, MICH

EXPORT DEPT. 2111 WOODWARD AVE., DETROIT MICH

CS—39

BETTER THAN CAST IRON? YES!

Dura-tube units mean

Exclusive *with* **Janitrol!**



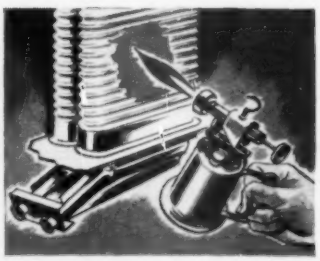


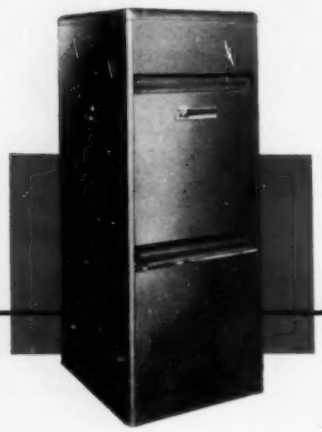
"BORN OF THE JET AGE"

Dura-tube, exclusive with Janitrol DeLuxe Gas-Fired Conditioners, is a combination of time-proved Janitrol design and a process developed by the National Bureau of Standards. American Gas Association has approved its use for domestic furnaces . . . allowing a temperature of 1100° F. where the previous maximum allowable temperature for cast iron and steel was 875°F.

Won't Burn Out!

As much as 1200°F. heat repeatedly applied to Dura-tube units has no damaging effect on this durable construction. (You sell the armored "heart" heat exchanger for longer life.)





FINEST EVER BUILT BY ANYONE—JANITROL 1954
DELUXE GAS-FIRED CONDITIONER

BETTER THAN STEEL? YES!

longer furnace life!

Here's the heating industry's most powerful selling story . . . extraordinary durability, a quality the public understands and appreciates.

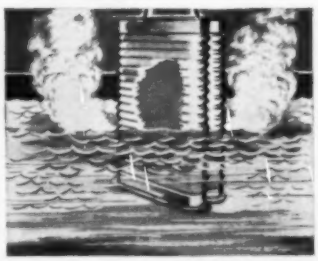
You will be backed up by the biggest, most powerful national advertising campaign in Janitrol's 35 years history of successful heating leadership.

So, if you can sell quality . . . and believe in it for your own future growth . . . get all the facts quickly on this sensational new Janitrol Conditioner and other profit-makers in the complete Janitrol line of gas and oil-fired equipment.

Dealerships are available in some territories, write immediately.

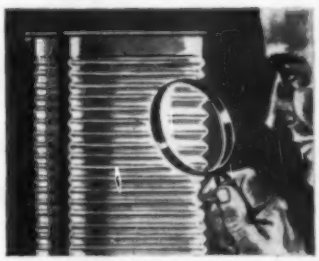
Won't Crack!

Tests with Dura-tube at 1200 ° F. show no damage when chilled with cold water. (You assure customers a minimum cost for upkeep and maintenance.)



Forget Corrosion!

Dura-tube's tough armor resists the combustion gases that eat away at ordinary steel or cast iron. (You sell extra safety with Janitrol's gas-tight sealed design for life-time protection.)



®Janitrol
Automatic WINTER SUMMER *Conditioning*

JANITROL DIVISION • SURFACE COMBUSTION CORPORATION • 400 DUBLIN AVE., COLUMBUS 16, OHIO

CHICAGO STEEL SLITTING SHEAR



For slitting long sheets and for cutting steel bars, band iron, etc. Main frame one piece solid steel with offset for clearance in cutting long sheets. Capacity 3/16 x 2" bars, 10 gauge sheets. Blades are made of high grade tool steel. Equipped with adjustable hold down

THE BEST IN HAND TOOLS ARE MADE BY

W. A. WHITNEY MFG. CO.

636 RACE STREET **ROCKFORD, ILLINOIS**

W. A. Whitney tools are your best bet because they are simple in design, sturdily constructed for the toughest uses, well balanced for easier handling, made from drop forgings of high grade alloy steel on all main parts, heat treated on all wearing parts, and unconditionally guaranteed against defects in material and workmanship. Our trade mark on every tool is your as surance of entire satisfaction and the utmost in service. Please write us today for our complete catalog.



NO. 1 PUNCH

Capacity 3/8" hole through 1/4" iron
Length 34". Wt. 23 lbs. Depth of throat 1 7/8"
Punches and dies 1/8" to 9/16" by 1/64"



No. 4-B TINNER'S PUNCH

Capacity 1/4" hole through 16 gage iron
Length 8 1/2". Wt. 3 lbs. Depth of throat 2"
Punches and dies 1/16" to 9/32" by 1/64"

Also supplied with three punches and three dies, in cardboard carton.



NO. 2 PUNCH

Capacity 5/16" hole through 1/4" iron
Length 23". Wt. 14 lbs. Depth of throat 1-11/16"
Punches and dies 3/32" to 1/2" by 1/64"



CHANNEL IRON PUNCH

(A companion to No. 2 Punch)
Capacity 1/4" hole through 1/4" iron
Length 23". Wt. 17 lbs. Depth of throat 1 7/8"
Punches and dies 3/32" to 1/2" by 1/64"



NO. 6

Skylight, Ventilating and Tank Flange Punch (Especially adapted for button punching)
Capacity 1/4" hole through 3/16" iron
Length 26 1/2". Wt. 10 1/2 lbs. Depth of throat 1 1/2"
Punches and dies 1/8" to 9/32" by 1/32"



NO. 8-B PUNCH

Capacity 1/4" hole through 1/8" iron
Length 18 1/2". Wt. 7 1/2 lbs. Depth of throat 2"
Punches and dies 1/16" to 7/16" by 1/64"

NO. 91 BENCH PUNCH

Capacity 1/2" hole through 1/4" iron
3/4" hole through 3/16" iron
2" hole through 1/8" iron
Weight 82 lbs. Depth of throat 5"
Punches and dies 1/8" to 2"

CHANNEL IRON
2 1/2" Flange x 1/4" Web
Angle Iron
2 1/2 x 2 1/2 x 1/4"





T-12 TINNER'S RIVETING HAMMER — 1202



T-18 TINNER'S SETTING HAMMER — 1802

NO. 92, 93 and NO. 94 BENCH PUNCH

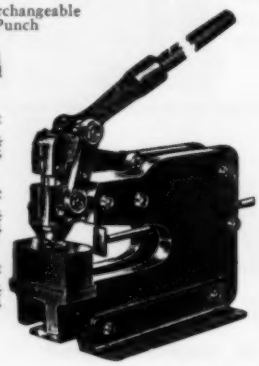
All parts interchangeable with No. 91 Punch

(Use No. 91 punches and dies)

No. 92 Weight 165 lbs. Depth of throat 10"

No. 93 Weight 500 lbs. Depth of throat 18"

No. 94 Weight 675 lbs. Depth of throat 24"





PUNCHES

Whitney Punches For Ball Bearing Screw Punches

No.	Sizes	Dimensions H.	B.	Inches L.
10-1/8	to 1/2 by 32nd	5/8	1/2	1-3/16
20-1/8	to 11/16 by 32nd	7/8	11/16	1-3/4
40-3/16	to 1 by 32nd	1-3/16	1	2-5/16



PUNCHES

Whitney Punches For Lever Punches

No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	9/16	2-3/8
*2	3/32 to 1/2 by 64th	1/2	2-3/8
4	1/16 to 9/32 by 64th	5/16	1-3/16
5	1/16 to 9/32 by 64th	9/32	1-1/4
*6	1/8 to 9/32 by 32nd	1/2	2-3/8
7	1/8 to 7/16 by 32nd	7/16	1-7/8
7-1/2	1/8 to 7/16 by 32nd	1/2	2-3/8
8	1/16 to 7/16 by 64th	7/16	1-15/16

*This punch used in No. 2 Channel, Close Corner No. 2, Close Corner Channel, No. 6 and Imperial No. 8.



DIES

Whitney Dies For Ball Bearing Screw Punches

No.	Sizes	Dimensions D.	Inches H.
10-1/8	to 1/2 by 32nd	13/16	15/32
20-1/8	to 11/16 by 32nd	1-1/4	21/32
40-3/16	to 1 by 32nd	2-1/8	15/16



DIES

Whitney Dies For Lever Punches

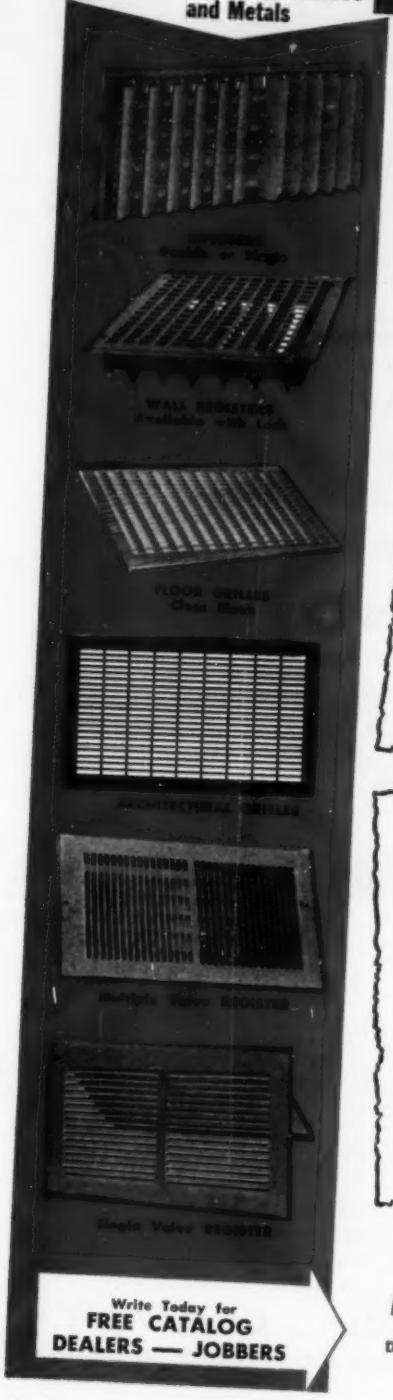
No.	Sizes	Dimensions D.	Inches L.
1	1/8 to 9/16 by 64th	1	2
*2	3/32 to 1/2 by 64th	7/8	1-3/4
4	1/16 to 9/32 by 64th	7/16	3/4
5	1/16 to 9/32 by 64th	7/16	3/4
**6	1/8 to 9/32 by 32nd	9/16	1-5/8
7	1/8 to 7/16 by 32nd	3/4	1-7/16
7-1/2	1/8 to 7/16 by 32nd	3/4	1-7/16
8	1/16 to 7/16 by 64th	11/16	1-1/4

*This die used in No. 2, Channel, and Imperial No. 8.
**This die used in No. 6, Close Corner No. 2 and Close Corner Channel.
When ordering punches be sure to specify size of punches and number of tool in which punch is to be used.

FOR EVERY HEATING AND AIR CONDITIONING NEED...

A-J GRILLES and REGISTERS

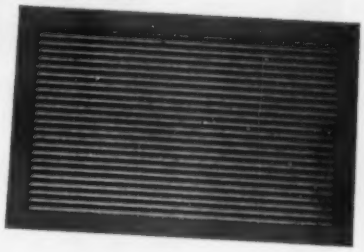
Available in Wide Range of Sizes, Patterns, Finishes and Metals



No-Vision GRILLES

Completely "sight-proof". Channel frame with steel "V" shaped louvers set on approximately ½" centers. Choice of 2 style frames: Channel or Flange. Adjustable auxiliary frame (as illustrated) available at extra cost. Maximum free area. Core thickness, 1". Available any size, choice of finishes.





Thin Core GRILLES



For Doors & Partitions ¼" to 3¾" Thick!

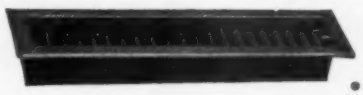
- **Cuts Installation Time Over ½!**
- **Easy to Install — Anyone Can Do It!**
- **Complete — No Wood Moldings To Add!**

Telescoping auxiliary frame fastens to grille with posts and screws. Clamps tight. No holes to position. Practically ends danger of ruining door. All steel. No vision — 80% free area. All sizes — frame optional. Choice of finishes.



Grilles for PERIMETER HEATING

Designed for floor use, or in walls with high velocity system. Heavy gauge curved vanes factory-set for fan-shaped air pattern. Single adjustable valve in 2¼" width, adjustable multiple valves in 4" and 6" widths. Available in 10", 12", 14" lengths; oak finish or prime coat.



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MAIL THIS COUPON TODAY!

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Kansas City 8, Mo.

Please rush me a copy of your catalog of Grilles, Registers and Diffusers.

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Firm .....

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City ..... State .....

Write Today for FREE CATALOG DEALERS — JOBBERS

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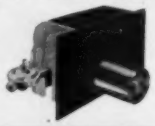
Dept. H-1 2119 Washington Kansas City 8, Mo.

Easier to install . . ."Best by Heat Test"

INSHOT GAS Conversion Burners



Speedy to install and service. Completely automatic! Convert oil-fired furnaces and boilers to gas heat. Model 4H (left) with burner tube only 7" long, 4-1/4" diameter, works perfectly where average burner will not fit. Model 6H (right) with burner tube 7" long, 6" diameter. High BTU capacity.



Beautiful New UPSHOT

Tubular Steel Burner



America's most beautiful gas conversion burner! Factory assembled, complete in 1 package for *fast*, one-man installation. Durable, long-lasting, exclusive features! Adjustable in length and height. Competitively priced. Most popular size with 3/4" controls. Shipping wt. 32 lbs.

first in quality
first in demand!

ADAMS GAS CONVERSION BURNERS

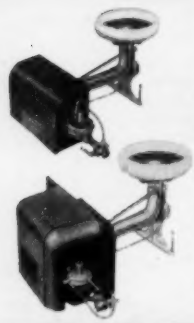
Built for a lifetime of dependable service, Adams burners are first choice with contractors, dealers and leading furnace manufacturers! Adams features a complete line of finest quality burners for every possible use. Specification burners, adapted to your own specific application, are also furnished at low cost. Write for details.

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All Burners Carry Our 36-Month Factory Warranty

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UPSHOT Cast Iron Burners



Designed to convert coal-fired units to gas. Adjustable to any size furnace. Completely automatic. Newest features for safe, dependable operation. Requires less gas to maintain temperature, lowering heating costs! (Also available in commercial sizes to 1,000,000 BTU input, less AGA approval.)

Operates on City or Bottled Gas!

DUAL FUEL Gas Conversion Burner



During periods of gas shortage, outdoor temperature control changes burner from city gas to bottled gas! Assures adequate supply of fuel at all times. Exclusive automatic features. Durable, easy to install, long-lasting.

Also Burners for LP-Propane Gas Only!

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Models for use with city or LP-Gas. Finest quality cast iron burners for safe, longer-lasting dependable service. Application of burners made to your equipment in our laboratories.



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For use with city or LP-Gas. Finest quality steel shield with stainless steel inshot burner. Long-lasting, dependable service.

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THE *AMAZING* 3-WHEEL BAND SAW

designed especially for FAST, *SMOOTH stacked sheet metal cutting*

Save costly labor hours—get smoother, accurate cutting of stacked sheet metal with this new Bett-Marr three-wheel band saw. It's big enough to do most any job, small enough to fit most any space, and costs much less than any other comparable saw.



A Bett-Marr in your shop will pay for itself quickly. Cut your production costs by stacked cutting with a saw that's especially designed for sheet metal cutting.

Blade speeds are quickly adjustable for cutting any material without blade chatter. It's a versatile saw that will help you get more work out, faster and better.

■ **WRITE TODAY FOR THE AMAZING FACTS AND LEARN HOW YOU CAN CUT PRODUCTION COSTS WITH A BETT-MARR.**

MODEL 24S—Complete with riser bar insert and 4 sheet metal clamps.

BETT-MARR MODEL 14SM—A lower priced 2-wheel sheet metal band saw with 13½" throat that is perfectly adequate for work not requiring maximum throat depth.

BETT-MARR MFG. CO., HOPKINS, MINNESOTA

Does BIG! Costs LITTLE!

100 to 3300 FPM BLADE SPEEDS—Quickly adjusted for cutting iron, steel, forgings (100 FPM); stacked aluminum or galvanized sheets, bronze, brass, copper (600 FPM); wood, plastics, stainless steel (3000 FPM) without blade chatter.

CUTS 50 to 70 STACKED SHEETS—Up to 15 inches per minute; cutting accuracy is assured by case hardened guides with carbide back-up bearings (adjustable up to ½" blade width).

ONLY 61 INCHES HIGH—Compact-fits most any space—depth 44"; width 22", table sizes 20" x 22".

PERFECT BLADE CONTROL—Flanged wheels keep blade in position for smooth radius cuts and perfect straight line cuts. Blade positively will not slip off wheel in operation.

RUGGED ALL CAST FRAME—The rugged, all-cast frame gives perfect stability, eliminates blade chatter and assures smooth-cutting performance at all speeds.

POSITIVE 2-WHEEL CHAIN DRIVE—Prevents blade slippage. All ball-bearings are Neoprene sealed for lifetime operation. Blade and wheels are fully enclosed for maximum safety.



Everdur-welded, galvanized iron twin air risers supply heating-cooling air for Dallas' new Republic National Bank Building.



These Everdur-weld fabricated ducts ranged from 54 in. to 3 in. in diameter. Like duct surface, Everdur welds can't rust.



Seams were first tack-welded, then welded around the periphery, using ⅛-in. Everdur-1010 Rod and the carbon-arc method, on the 18-gage galvanized sheet metal ducts. The welding rod was supplied by Hill Equipment and Supply Company, Dallas, Texas.



View down one of the twin air risers, showing branches to each floor. Over a mile of Everdur welds were used in this system.

If it's galvanized—weld it with EVERDUR-1010 Welding Rod

There already exists an impressive collection of evidence that for welding galvanized iron the most successful rod is Everdur*-1010, the well-known ANACONDA Copper-Silicon Alloy. And there's additional convincing evidence in the more than a mile of Everdur welds in the 33 floors of galvanized iron air-conditioning ductwork installed in Dallas' new Republic National Bank Building.

Fabricated by the Farwell Co., Inc. of Dallas, the ducts are made of 18-gage galvanized iron and range from 54 inches to 3 inches in diameter. Twin risers run from the 3rd to the 36th floor. In the words of E. J. Bouffard, job superintendent, "carbon-arc welding with Everdur is the fastest, best and cheapest method we have found. The welds can't rust, and the heat doesn't disturb the galvanizing on the sheets."

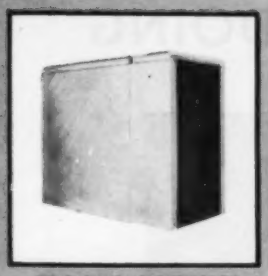
We can tell you of many more cases where Everdur has successfully welded galvanized metals. We suggest you try it on your next job. For full information on ANACONDA Welding Rods, let us send you a copy of Publication B-13. ANACONDA Welding Rods are available from distributors throughout the United States and Canada. *The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Ltd., New Toronto, Ontario.*

*Reg. U.S. Pat. Off. 53187

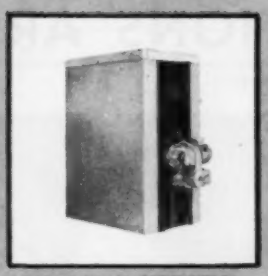
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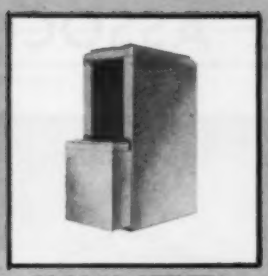
welding rods



H-2000 SERIES
OIL FURNACES



G-6000 SERIES
GRAVITY FURNACES



H-5000 SERIES
GAS FURNACES



H-5000 SERIES
OIL FURNACES

Sun FUEL MASTER



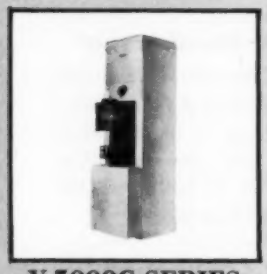
V-5000 SERIES
OIL FURNACES



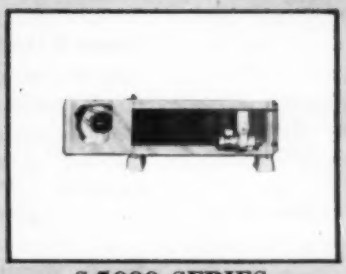


V-5000C SERIES
OIL FURNACES

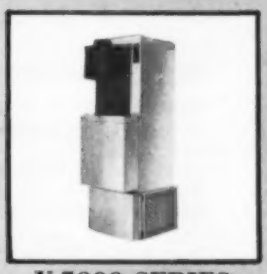
Sun FUEL MASTER



V-5000C SERIES
GAS FURNACES



S-5000 SERIES
SUSPENDED FURNACES



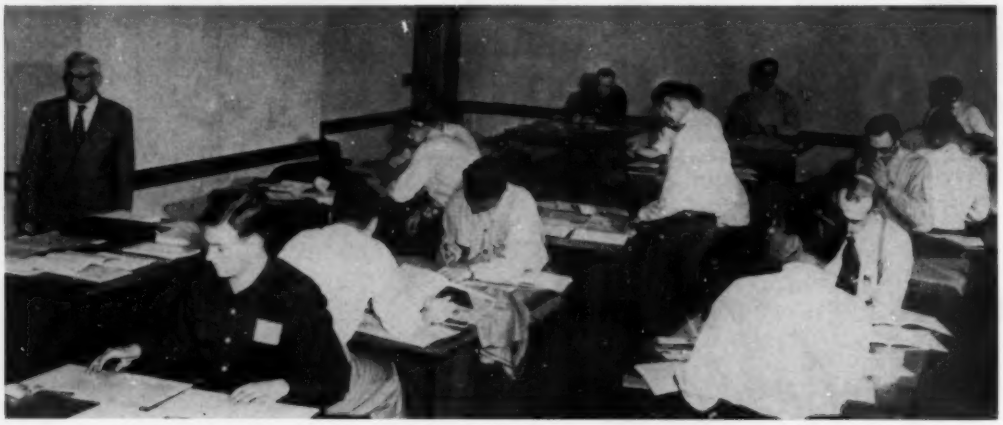
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SYCAMORE, ILLINOIS

WHAT THE ASSOCIATIONS ARE DOING



EXPERIENCE is gained at the college short courses by working out problems during classroom sessions

First Short Course at Oklahoma

ON FEBRUARY 15, 16, 17 and 18, many warm air heating dealers located in the vicinity of Oklahoma A & M College will be solving special classroom problems in heating and cooling at the first College Warm Air Heating Short Course of the year. A hundred men are now registered. There will be both basic and advanced classes in warm air heating and an advanced summer cooling problem. Each person registering will be given the opportunity to select the problem that adapts itself best to his background and future plans.

A complete library of 11 manuals prepared by the National Warm Air Heating & Air Conditioning Association will be given each student along with work sheets and calculating forms. The four day course will include lectures to be given by both industry and college representatives.

Some of the subjects to be covered are:

Air distribution — W. C. De Roo, Hart & Cooley Mfg. Co.
Servicing and adjustment of warm air systems — Joe Powley, Lennox Furnace Co.
Air cleaning — James May, American Air Filter Co.
Moisture control — R. C. Champlin, Skuttle Mfg. Co.
Selling the public on thermal environment — Dean L. G. Miller, technical consultant, NWAHACA.
Basic heating problems — R. Waalkes, Coleman Co.
Combination heating and cooling — F. W. Deady, Bryant Heater Co.

A proposed statewide heating code will be discussed at an evening forum by representatives from Oklahoma's leading wholesalers, engineers and dealers.

Further information may be obtained from Prof. R. R. Irwin, of Oklahoma A & M, Stillwater, in charge of this activity, or from American Artisan.

Detroit Expects 8000 Gas Jobs

A RECENT bulletin of the Detroit Warm Air Heating Association points out to its members that the Federal Power Commission is expected soon to release some 8000 gas heating installations in Detroit. These would include approximately 4000 conversion jobs and 4000 new installations. In anticipation of this release, the association is surveying its membership for opinions on a suggested advertising campaign which would cost about $5.00 per month per member.

The association held a special social meeting on its regular December meeting night, December 10. Music was provided by "Santa Claus" Krutsch at the piano, "Banjo" Ike Tracy and "Tromboneleer" Bill Newville.

Iowa Association Increases Membership

THE DES MOINES Heating Dealers' Association, founded three years ago, now has 31 members and eight associate members who are wholesalers. Officers of the organization are: president, John Lenz; vice president, Paul Hamilton; and secretary-treasurer, D. P. Schaal. Meetings are held on the first Monday of each month.

N. Y. Group To Hold 31st Convention

THE 31ST ANNUAL convention of the New York State Sheet Metal, Roofing & Air Conditioning Contractors Association is scheduled to be held at the Seneca Hotel, Rochester, January 17 to 20.

The opening address will be given on Monday morning by Lamont W. Childs, general chairman, after which Charles Villnow, president of the Merchandisers, the

Coming Events

Jan. 17-20 — New York State Sheet Metal, Roofing & Air Conditioning Contractors Association, Annual Convention. Seneca Hotel, Rochester. Clarence J. Meyer, Secretary, 567-69 Genesee St., Buffalo.

Jan. 25-27 — American Society of Heating and Ventilating Engineers, 60th Annual Meeting. Rice Hotel, Houston. A. V. Hutchinson, Secretary, 62 Worth St., New York 13.

Feb. 1-2 — Cleveland Indoor Comfort Conference. Harold Sharp, Chairman, 7802 Wade Park Ave., Cleveland 3.

Feb. 4-5 — Sheet Metal and Warm Air Heating Contractors' Association of Indiana, Annual Convention. Hotel Severin, Indianapolis. Frank E. Anderson, Executive Secretary, 439 S. 17th St., Terre Haute, Ind.

Feb. 4-5 — Buffalo Indoor Comfort Conference. Walter Duffy, Chairman, 601 Amherst St., Buffalo 7.

Feb. 8-9 — Boston Indoor Comfort Conference. Wm. H. Bowe, Jr., Chairman, 352 C St., South Boston 27, Mass.

Feb. 11-12 — Hartford Indoor Comfort Conference. Irving Landerman, Chairman, 209-11 State St., Hartford 3.

Feb. 11-13 — Sheet Metal and Roofing Contractors Association of Minnesota, Annual Convention. Radisson Hotel, Minneapolis. Arlowe W. Esau, Secretary, Mapleton, Minn.

Feb. 22-24 — Ohio Sheet Metal Contractors Association, Annual Convention. Deshler-Hilton Hotel, Columbus. William C. Lumm, Secretary, 2512 Albion St., Toledo 6.

Feb. 22-25 — Third Annual Industrial Ventilation Conference. Kellogg Center, Michigan State College, East Lansing, Mich. James C. Barrett, Michigan State College, Lansing 4, Mich.

Feb. 24-25 — Michigan Heating and Sheet Metal Association, Annual Convention. Pantlind Hotel, Grand Rapids. N. J. Biddle, Secretary, 3035 E. Grand Blvd., Detroit 2.

March 8-10 — Sheet Metal Contractors Assn. of Wisconsin, Inc., Annual Convention. Schroeder Hotel, Milwaukee. Irv. Kanitz, Secy., 225 E. Michigan St., Milwaukee.

April 20-22 — Sheet Metal Contractors Association of Illinois, Inc., Annual Convention. Abraham Lincoln Hotel, Springfield. E. A. Schmidt, Secretary, 1210 E. Laurel St., Springfield.

May 10-12 — Sheet Metal Contractors National Association, 11th Annual Convention. William Penn Hotel, Pittsburgh. J. D. Wilder, Executive Secretary, 170 Division St., Elgin, Ill.

May 16-20 — Oil Heat Exposition sponsored by Oil-Heat Institute, Commercial Museum, Philadelphia. R. H. L. Becker, Managing Director, 500 5th Ave., New York 36.

salesmen's auxiliary, will address the meeting. Following this, prizes will be awarded to winners of the 1954 apprenticeship contest sponsored by the association.

Guests at the Monday luncheon meeting will include architects and engineers of the city of Rochester, who will be welcomed by Samuel B. Dicker, mayor. Ivar E. Anderson, Revere Copper and Brass, Inc., will present a film on the subject of sheet copper in building construction.

Reports from the safety committee, under the chairmanship of Charles R. Joyce and William C. Schmitt, Jr., will be heard during the afternoon session.

A roofing and sheet metal forum is planned for Tuesday morning, with George Ballard, Sr., acting as moderator. A. L. Veverka, Follansbee Steel Corp., will speak on terne metal roofing. At the afternoon session, A. J. Sabathne, president, Sheet Metal Contractors National Association, will speak on the advantages of belonging to the national association. Following this will be a heating and ventilating forum, moderated by R. W. Friday. Speakers scheduled include J. P. Field, vice president, the Williamson Heater Co., and J. D. Wilder, executive secretary of SMCNA. In the evening a banquet will be held beginning at 7:00 p.m., followed by entertainment and dancing until 1:00 a.m.

On Wednesday morning, members will hear reports from the state labor relations committee, the auditing committee and the resolutions committee. The Merchandisers, who will also meet on Wednesday morning, will hear reports from the secretary and treasurer, from the auditing committee and the nominating committee.

The convention will close with a luncheon at 1:00 p.m.

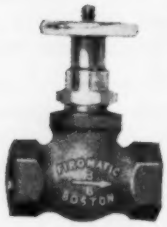
Indiana Convention Set for February

PROGRAM PLANS for the 36th Annual Convention of the Sheet Metal and Warm Air Heating Contractors Association of Indiana, scheduled to be held February 4-5 at the Hotel Severin, Indianapolis, are now complete. Committees have been appointed as follows: convention, Don McCloskey, chairman, Harold Boyd, co-chairman, and Homer Selch; program, Wm. E. Garber, chairman, Robert Hurt and Homer Selch; banquet, Charles Buck, chairman, Jack Ellis, Dick Watson, Ray Boyd, Leonard

(*Please turn to page* 218)

Firomatic PRODUCTS

VALVES • FUEL OIL FILTERS • SAFETY DEVICES



FIROMATIC GLOBE VALVE

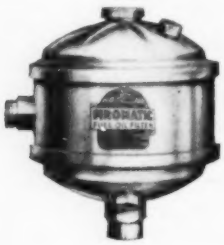
Firomatic Fusible and Non-Fusible Valves

FURNISHED WITH OR WITHOUT COPPER TUBING CONNECTIONS

MORE THAN 80 DIFFERENT TYPES AVAILABLE in a line that includes Globe, Check, Lever, Anti-hum, Tank and Range Burner Valves. All Firomatic Fusible and Non-Fusible Valves can be operated manually and are provided with self-adjusting stuffing box and back seat feature which prevent leaks at the valve stem.



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FIROMATIC FUEL OIL FILTER
Greater Capacity . . .
More Filtering Area.
Adaptable for All Service.



FIROMATIC TANK GAUGE Available in 1½" and 2"



FIROMATIC TANK VALVE Available in 24 Different Types

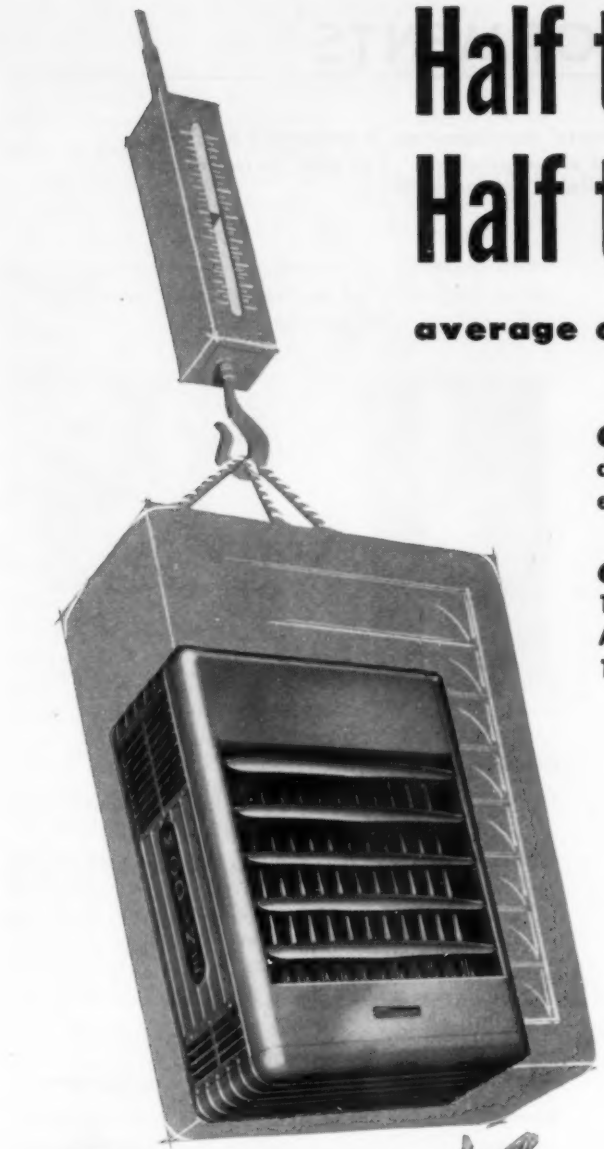
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Send for New Catalog "A"

THE MORSE-SMITH-MORSE CO.
165 Dexter Avenue
Watertown, Mass.

SOLD NATIONALLY BY JOBBERS ONLY

Half the weight . . .
Half the size of the

average of 7 other leading gas units



Compare weight . . . Modine 105,000 Btu unit, 95 lbs. Average of 7 other makes, 205 lbs.

Compare size . . . Modine 105,000 Btu unit, 8258 cu. in. Average of 7 other makes, 15,184 cu. in.

BEFORE you buy any gas-fired unit heater, be sure you see Modine's great stainless steel unit. The tremendous space and weight savings achieved make installation easier, less expensive. On one job, it cost the heating contractor $600 less to install 66 Modines than conventional units — savings he passed on to the owner.

What's more, Modine design promotes maximum combustion efficiency, faster heating response. In fact, Modine delivers heat within *5 seconds* after thermostat calls for it.

When you buy Modine, you get the greatest name in unit heating. For 25 years Modine has set the pace in steam and hot water unit heaters. Now you can get this famous balanced performance at low overall cost in Modine Gas-Fired Unit Heaters. For all the facts, see the Modine representative listed in your classified phone book or use handy coupon.



Only Modine Gas-Fired Unit Heaters have *stainless steel* heat exchangers *and* burners

Modine UNIT HEATERS

For free copy of Bulletin 653, clip this coupon and mail today



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EQUIPMENT DEVELOPMENTS

The latest information on manufacturers' developments is presented here with brief summaries of the applications of these products. For new literature giving product information which is available see page 242.

Oil and Gas Fired Furnaces

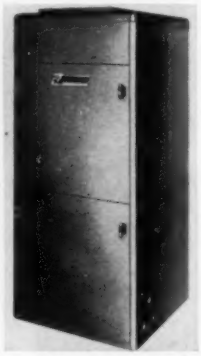
"WINKLER UNIVERSAL" furnace for small and medium sized homes with or without basements — Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind. Conventional or counterflow, oil or gas fired units are available. Casings are insulated with a cellular asbestos (faced with aluminum foil, and held in place by air deflectors) used to keep the casing cool. Units are 22 in.

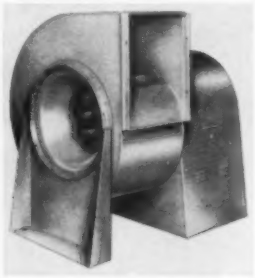


square and 65 in. high. The heat exchanger is of corrugated design, 17 in. across the face, but offering a heat transfer surface of 30 in. on three sides. Expansion and contraction take place without noise, the company states. For oil firing, the furnace may be equipped with either a low or high pressure burner. Individual kits also are provided for natural, manufactured, mixed and LP gases, and for a natural-LP gas combination requiring an outside temperature switch. The downflow model can be turned upside down for conventional upflow with no additional parts and only minor changes, according to the manufacturer.

Summer Air Conditioner

MODEL SAC summer air conditioner, for use with a matching winter unit — Janitrol Div., Surface Combustion Corp., Columbus 16. The compressor is designed for quiet operation. Fiber glass acoustical and thermal insulation is used. The 5 ton unit is a combination of the 2 and 3 ton capacity models. Standard equipment includes a large capacity, resilient mounted centrifugal fan, driven by a 230 volt, 60 cycle, single phase motor which has overload protection. The unit has a water cooled condenser and the refrigerant is controlled by a twin capillary tube restrictor.





Above: Blower-Motor Assembly

Left: Conditioner

Blower-Motor Assembly

VENTILATING SETS, consisting of fan, motor and drive in a single package — Westinghouse Electric Corp., Sturtevant Div., 200 Readville St., Hyde Park, Boston 36. The Series 900 is direct drive from fan to motor, with six different sizes ranging in volume capacity from 200 to 3200 cfm. The Series 1000 features an adjustable v belt drive, with 12 sizes ranging in capacity from 375 to 14,400 cfm. Sizes range from 54 × 67 × 58 in. for the largest model to 10 × 12 × 18 in. for the smallest.

Window Conditioner with Reverse Cycle Heating

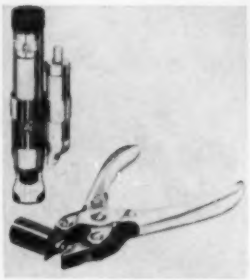
WINDOW TYPE air conditioner which utilizes the reverse cycle principle to provide heating in addition to providing summer cooling — Servel, Inc., Evansville 20, Ind. The new conditioner is the same in size, appearance and other features as the one introduced by the company a year ago, except for the heating feature. The unit removes heat from indoor air at the rate of about 9000 Btu per hr, and in cooler weather, pumps heat in at a rate of about 12,000 Btu per hr. It is available in ¾ and 1 hp models.

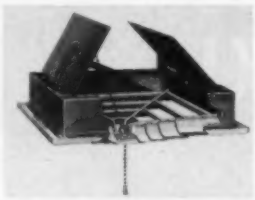
The company is also offering a partition type heating-cooling air conditioner which looks like a partition and may be used as a divider wall or can be built into a wall. The exposed surfaces of the conditioner may be finished to match the decor of a room.

Sheet Metal Hardness Tester

MODEL 317 PRECISION TYPE sheet metal hardness tester, for testing ferrous and non-ferrous sheet metal — The Pacific Transducer Corp., 11921 W. Pico Blvd., Los

Angeles 64. By the use of a calibrated microscope and reticle, readings can be obtained well within two points in the Brinell scale, according to the company. Sheet stock of from 0.010 in. to 0.250 in. may be measured. The instrument operates by using a ⅛ in. ball with a 150 kg load. A precision ground spring which is used to load the ball remains in constant calibration. Pressure on the sheet is applied by a special pair of parallel jaw pliers. The indentation is measured with the microscope.





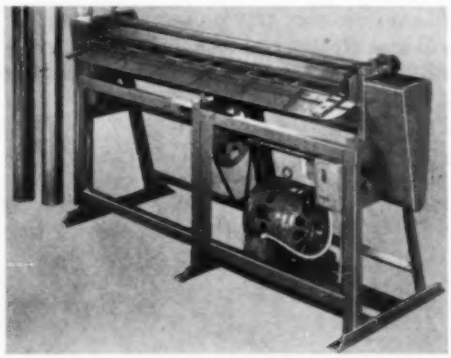
Above: Diffuser
Left: Sheet Metal Tester

Square Ceiling Diffuser

SERIES 60 CEILING DIFFUSER featuring a square design and four way diffusion — Lima Register Co., 651 N. Baxter St., Lima, Ohio. It has a series of step down vanes that discharge air outward and slightly downward in all directions at a reasonably high velocity, the company states. It can be installed either as a warm air or cooling outlet and is recommended by the manufacturer for return air, especially for perimeter installations. It is available in six sizes — 6, 8, 10, 12, 16 and 20 in.

Round Duct Rolling Machine

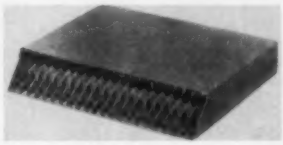
ROUND DUCT rolling machine designed to handle ducts 2 to 5 ft in length and 4 to 8 in. in diameter — Fallsington Mfg. Co., Fallsington, Pa. The average operator can feed 25 sheets of 30 to 24 gage metal per minute

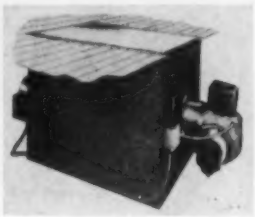


and the machine rolls without damage to the ductwork or its locking device, the company states. Rollers are spring loaded, with two adjustments, and are chain driven.

Aluminum Panels with Paper Core

"REYNOCELL" sandwich type panels, comprising two outer sheets of aluminum and a paper honeycomb core, for use in curtain wall construction, as movable partitions, and in fabricating such equipment as cabinets, store display fixtures, marquees, etc. — Reynolds Metals Co., 2500 S. 3rd St., Louisville. The embossed aluminum is bonded with heat and pressure to the core of resin-impregnated paper which is formed into a figure eight honeycomb construction. Available in standard thicknesses ranging from 1 to 4 in., the panels are unusually strong and rigid in relation to their light weight, and have good thermal and acoustical insulation qualities, according to the company. Panel sizes range up to 57 in. × 16 ft. A panel 1 in. thick weighs 1.01 lb per sq ft; a 2 in. panel, 1.16; a 3 in. panel, 1.31; and the 4 in. panel, 1.46. A variety of embossed patterns is available for the aluminum skins.





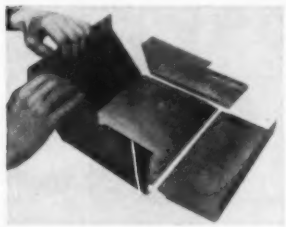
Above: Panel
Right: Furnace

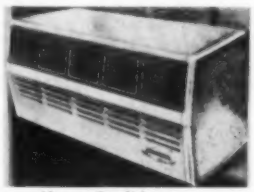
Oil Fired Floor Furnace

MODEL FL80 "Floor-O-Level" forced warm air floor furnace, fired with a pressure atomizing oil burner — Certified Furnace Corp., P.O. Box 1059, Trenton 8. The furnace and burner have been UL listed as capable of burning No. 2 fuel oil. The furnace is equipped with a 10 in. circulating fan which operates automatically. It has an output of 80,000 Btu per hr when fired with a 0.75 gph nozzle. The fuel pump, mounted integrally with the burner, can lift fuel from an oil tank located at below-furnace level. The furnace casing measures 29½ in. in height.

Prefabricated Duct Fttings

REDESIGNED LINE of prefabricated duct fittings which are made of galvanized metal and feature snap together assembly — Duc-Pac Div., Swett Bros., 78 Island Pond Rd., Springfield, Mass. The new innerlock permits assembly of any fitting in a matter of seconds and eliminates the need for any folding over operation with a hammer, according to the manufacturer. The knocked down fittings are also designed to save storage space.





Above: Conditioner
Left: Duct Fittings

Redesigned Room Air Conditioners

REDESIGNED LINE of 1954 room air conditioners consisting of 20 new models — Quiet Kool Corp., 46 Oliver St., Newark. The "Compact" series, comprising ½ and 1/3 hp models, fits windows 24½ to 36 in. wide. Models

(*Please turn to page* 220)

When you Compare Air Filters . . .

FEEL THE FILTER PACK!



The soft, silky glass fibres are easy on the hands—and really stop Dust! The *magnified* view of the Glasfloss filter pack above shows why the long, fine curly fibres provide efficient filtering action. This fluffy, resilient mass provides an intricate maze of air passages with a greater surface area to catch and hold more dust throughout the entire pack. RESULT: Longer life, less changes, lower cost.

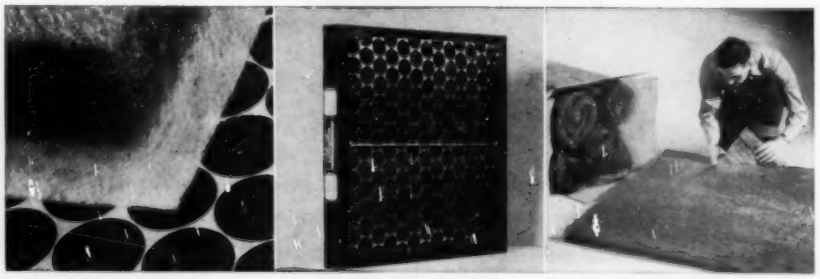
Glasfloss DISPOSABLE AIR FILTERS

- Hold more dust at higher efficiency
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- Insure greater air capacities
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for heavy industrial use

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the all-purpose filter

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1954 Sno-Breze and Palmaire

EVAPORATIVE COOLERS



NEW 1954 styling

1954 Palmer coolers are completely restyled by Vytant Aleks, well known product designer in the appliance field. SNO-BREZE and PALMAIRE now *look* like the top-quality appliance that they *are*. They have more *sales appeal* to make more money for *you!*

NEW 1954 construction

1954 SNO-BREZE and PALMAIRE coolers are *built* better to *sell* better. Heavier and stronger steel construction and two coats of tougher baked-on enamel make these coolers more *durable*, give your customers lasting satisfaction. New Palmer coolers are *top-quality appliances* for top sales and profits.

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When you sell Palmer coolers, you sell the *best-known* line in the business. And the Palmer line is *complete*—there's a cooler to meet every demand of your market, from small room coolers to the largest residential or commercial installation.

SNO-BREZE and PALMAIRE evaporative coolers will be pre-sold to consumers with a series of hard-selling *⅔-page advertisements*, starting in March in HOLLAND'S and SUNSET magazines. This campaign will be backed up by advertising programs in selected *local markets*.

Palmer's complete *merchandising program* offers liberal co-operative advertising allowances, effective selling folders and broadsides, and point-of-sale display cards, window streamers and elaborate die-cut floor displays.

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Fan-type coolers



Larger coolers for residential or commercial installations

Palmer Manufacturing Corporation
Phoenix, Arizona

Subsidiary of McCray Refrigerator Company, Inc.

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Company.....
Address.....
City.....Zone.....State.....

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Saves up to 4/5 over ordinary fireplaces



- **Fireplace and flue in one low-cost unit!**
- **Clearance to combustibles is built-in!**
- **Installs easily in new or existing homes!**

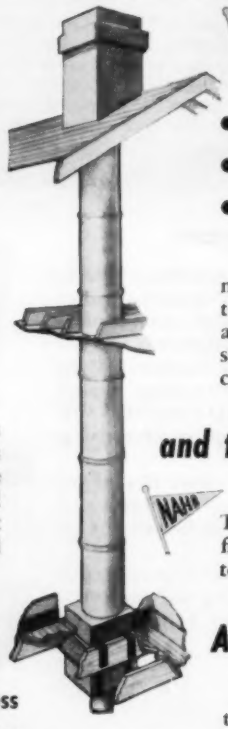
The latest, most amazing development in fireplace construction! A fireplace and flue combination that costs far less than ordinary, bricked-up types; installs easily even on wood floors; and needs no clearance from combustibles because the clearance is *built-in.* A full 30" fireplace to dress up even the smallest home with a cheerful, open hearth, the Thulman Fireplace is designed for *controlled* heat radiation to avoid upsetting the room-to-room balance in automatic heating installations.

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INDOOR INCINERATOR



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- **Only 20" wide, 24" deep, 36¼" high**
- **Holds a full two bushels of waste**
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- **Gleaming white enamel over rust-resisting Poly-Kote base.**



THULMAN CHIMNEY

- **Lightweight sectional chimney one man can erect**
- **Vitreous liner, aluminum casing outlast the house**
- **Now made and UL-listed in 7" flue size**

The lightweight chimney that is more efficient and more safe, under both normal and extreme conditions, than lined brick chimneys costing over twice as much. UL listed *for all fuels,* its patented construction has ample clearance built-in, so combustibles can butt directly against the outer aluminum casing.

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A low-cost vent, similar in size and design to the Thulman Chimney, built expressly for use with gas-fired furnaces, water heaters, and the like. Be sure to see this Thulman development at the Exposition!

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Majestic's full line of winter air conditioners includes models for the smallest or largest homes. There are automatic gas- or oil-fired units suited to every type of modern, forced warm-air heating system—with summer air conditioners to match—in horizontal flow, counterflow, or upflow design.

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Just at right of entrance
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CRUCIBLE first name in special purpose steels

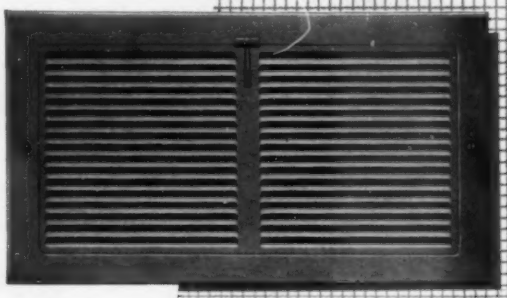
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FROM ONE RELIABLE SOURCE

Why not take advantage of the time-saving convenience of filling all your register needs from the complete dependable line made by The Auer Register Co.? Here are registers and grilles for all purposes—gravity or air conditioning.

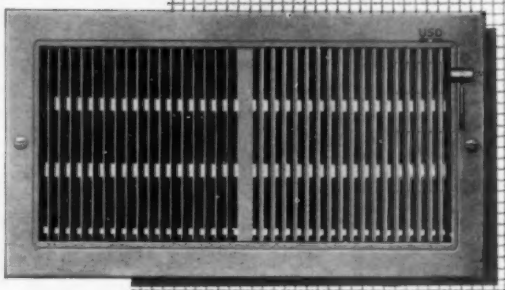


Auer No. 7032 Register with flexible fins and single valve

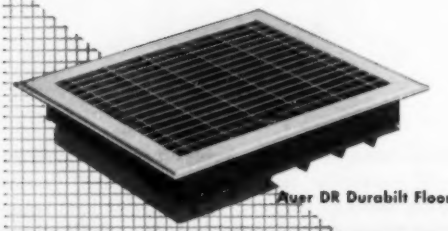
Auer REGISTERS
QUALITY CONTROLLED PRODUCTION

When you install Auer registers, you have the assurance of accurate dimensions and uniform high quality—the result of Auer's system of strict quality control of production.

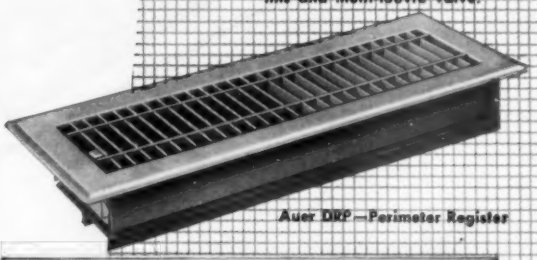
Write for the 30-page Auer Register Book for complete information.



Auer No. 4432 Register with flexible fins and multi-louvre valve.



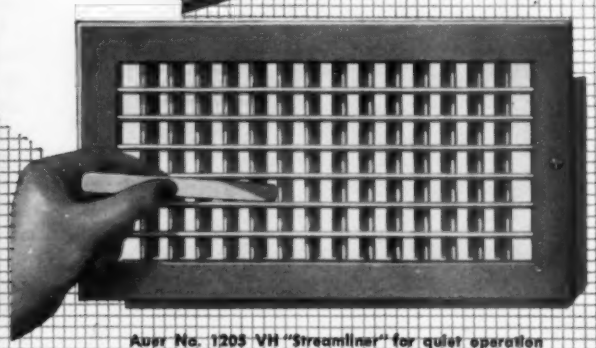
Auer DR Durabilt Floor Register



Auer DRP—Perimeter Register



Auer H-800 Heat Rite Baseboard Register



Auer No. 1205 VH "Streamliner" for quiet operation at high velocities. Full range of sizes with single or double banks of adjustable bars, horizontal or vertical. All types available with or without multi-louvre valves.

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An Exhaustive and Clear Explanation of Manual No. 7 That Shows You—



The author of "HOW, WHAT and WHY"—Professor S. Konzo of the University of Illinois—is one of the nation's foremost authorities on every phase of residential air conditioning and warm air heating. It was in Professor Konzo's office that the brunt of the work of assembling data and making the calculations for Manual No. 7 was carried out, and he was, therefore, ideally qualified to prepare this explanation of the Manual's background, make-up and correct use.

—HOW to Use It Correctly

—WHAT Experience Is Behind It

—WHY Every Dealer Should Use It

"The HOW, WHAT and WHY of the Code and Manual for the Design and Installation of Warm Air Winter Air Conditioning Systems"

by S. KONZO

Special Research Professor—Engineering Experiment Station, University of Illinois

75 Pages — 8½" x 11" — $1.00

Users of Manual No. 7 will find this "HOW, WHAT and WHY" booklet invaluable toward acquiring a clearer understanding of the Manual and properly applying it in the planning and installation of warm air winter air conditioning systems. Published originally as a series of articles in the magazine AMERICAN ARTISAN, this clear and comprehensive analysis has proved so helpful to dealers everywhere that now, in response to a wide demand, it has been reproduced in full in this new 75-page booklet "HOW, WHAT and WHY."

Professor Konzo begins "HOW, WHAT and WHY" by telling why a standard designing procedure for warm air winter air conditioning systems was needed by the industry. He reveals how the country's leading manufacturers of warm air heating equipment got together to work out such a method . . . how nearly 200 of the industry's key engineers held scores of meetings over a long period to coordinate data and experience in working out the dependable, simplified design and installation procedure which Manual No. 7 now offers.

Following this introduction, "HOW, WHAT and WHY" goes into a detailed explanation of the designing procedure itself, section by section. It shows the research and experience behind every rule, recommendation, and table the Manual contains. It tells why such factors as temperature drop in ducts, c.f.m. air delivery, air changes per hour, and various other factors which were once considered vital in the planning of forced air heating systems no longer need concern the designer. It provides much interesting supplementary information and comment which helps make each step in the suggested procedure easy to follow and assures the user of the Manual's complete soundness.

An especially useful feature of this explanatory booklet is a Cross Index which permits finding quickly full information about any item in the Manual which is not wholly clear. All in all, this "HOW, WHAT and WHY" booklet will not only assist owners of the Manual to use it to the fullest possible extent, but it will, in the bargain, add materially to their knowledge of every phase of winter air conditioning.

Table of Contents

- The New Manual Simplifies Engineering
- How to Figure Heat Losses
- Furnace Selection and Rating
- Blower Selection and Blower Ratings
- Successful Blower Operation
- Registers—Locations, Types, Sizes
- Procedure for Making Plant Layouts
- Equivalent Length of Fittings
- Equivalent Length of Registers
- Sizing the Branch Ducts
- How Tables 8 and 9 Were Established
- Sizing Return Air Ducts
- Trunk Duct and Bonnet Construction
- Sizing of Trunk Ducts
- How to Adjust and Balance a Warm Air Winter Air Conditioning System
- Reference List
- Cross Index

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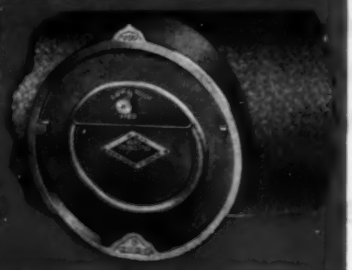
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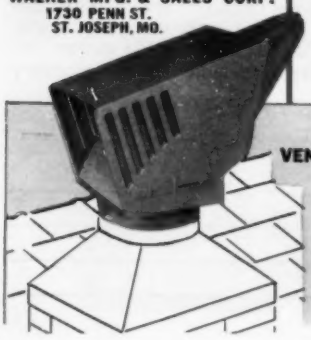
Check These 9 POINTS

1. **EASE OF ADJUSTMENT** with exclusive patented pointer and calibrated dial.
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is winning approval on more and more installations. Proved to be ideal in design and construction to correct insufficient draft and stop down draft . . . and to solve ventilating problems. Sizes from 3" to 8" ready for immediate delivery.

DEALER CLOSES MANY SALES —

(*Continued from page 95*)

system cleaned and inspected, the lead is turned over to a salesman who calls that evening when the members of the family are all together.

The salesman examines the heating system and explains in detail how the cleaning job will be handled, at the same time pointing out what is needed to modernize the existing heating system. Frequently the salesman will point out that a certain room has been difficult to heat during cold spells, that one room overheats, or that there is some other drawback apparent to the well-trained heating engineer. The salesman's ability to note these conditions without having been told about them impresses the prospect and often results in complete modernization of the heating system.

If cleaning the heating system is all that is needed, the salesman places the cleaning job on the truck schedule and the home owner is told the day and the hour (a time convenient to both the housewife and the company) at which the truck will be there. This prevents any possible misunderstanding. The cleaning job is usually scheduled for about a week ahead of the date on which the cleaning is done. The cost for a cleaning job is $15.00, which covers the expense of this department. However, out of the 112 cleaning jobs a month, enough good remodeling leads are developed so that about 20 new furnaces are sold.

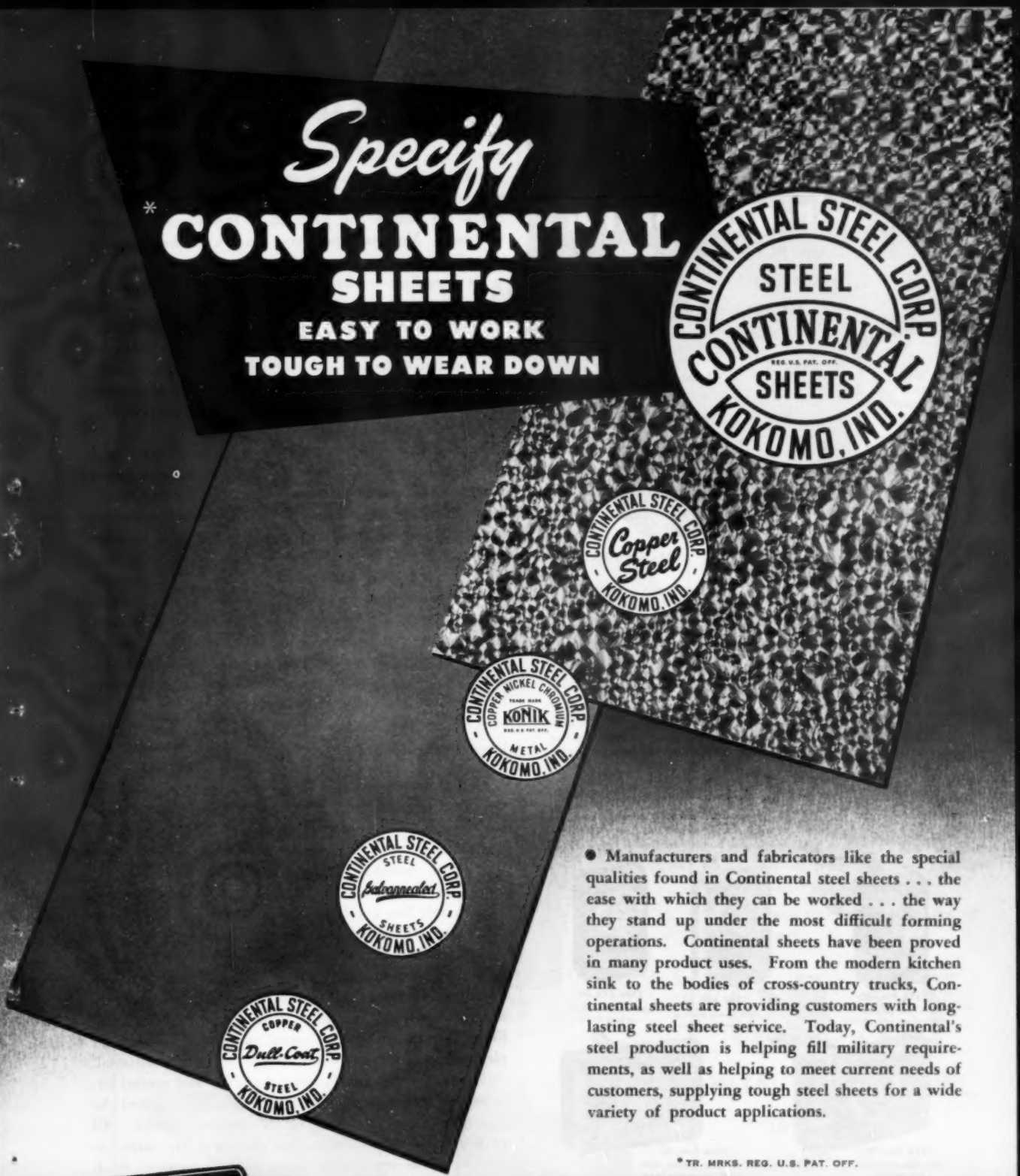
Other types of servicing also lead to sales. Where the service man would normally answer a service call, make the repair or adjustment necessary and fill in his report, he now adds to the report comments relative to the condition of the heating system. Space on the service report is also provided for possible leads to the sale of water heaters, humidifiers and incinerators. Before the service man leaves the job he attaches in a prominent place an instruction card bearing the company's name, address and phone number. This card serves as a constant reminder to the customer of where he can get quick, competent advice on heating problems.

Salesmen Have Know-How Plus Literature

The company employs five salesmen, each of whom is capable of closing the sale without consulting the office. He estimates the building heat loss, sizes the ducts, lays out the air distribution system and estimates the cost. Each salesman carries a number of contract blanks so that arrangements can be completed on the first call.

Each salesman is also provided with a number of sales tools that aid him in showing the customer how the remodeled heating system will appear when completed. Literature supplied by the manufacturer, tables of performance, fuel cost data and photographs of other installations are among the most effective tools used. Most of the photographs of recent modernization jobs show "before" and "after" shots, since the prospects are usually interested in improving the basement area.

Mr. Gogolin says, "Before I consider a man for em-



● Manufacturers and fabricators like the special qualities found in Continental steel sheets . . . the ease with which they can be worked . . . the way they stand up under the most difficult forming operations. Continental sheets have been proved in many product uses. From the modern kitchen sink to the bodies of cross-country trucks, Continental sheets are providing customers with long-lasting steel sheet service. Today, Continental's steel production is helping fill military requirements, as well as helping to meet current needs of customers, supplying tough steel sheets for a wide variety of product applications.

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It's what your customers want!

Model FAL-10A

Here's our latest addition to the Crise line of better performing, better looking, *more saleable* controls. It's a combination winter fan and limit control with the added feature of an easily accessible manual switch to provide continuous summer ventilation. All components operate separately and independently of each other . . . all are engineered in the Crise tradition for dependability and long life.

You can sell this and other *economically priced* Crise controls at a good profit while giving your customers the highest quality and best value. See your jobber or write us for details.

CRISE **THE MOST VERSATILE LINE**

These multi-purpose controls save in inventory—permit stocking half the normal number of control types.



TYPE FOL-60 Warm air limit control or fan control

TYPE FOL-70 Hot water control, immersion type

TYPE FOL-50 Hot water control, surface type

TYPE FAF-15 Two speed furnace fan control

TYPE FAL-30 Hot water control, dual circuit, immersion type

CRISE CONTROLS
a division of
ACRO MANUFACTURING COMPANY
Columbus 16, Ohio

ployment in our organization, he must meet all of the standard requirements of a good salesman in addition to having a background in the warm air heating field. He must make a good appearance, speak well, be courteous and know when to close a sale." Even with this background it usually takes about six months for a man to follow the pattern and pace set by the company's other salesmen. Most salesmen have been with the company since its first year.

Mr. Gogolin considers the sales training program to be one of the most important steps in the operation of the business. The program is a continuous one. Weekly sales meetings are held, and instructions are given on new products, trends and techniques. No new policy is put into effect until it has been discussed a number of times and then tried on a sample group to obtain data on its acceptance by those involved.

A good sales staff needs incentive to be effective, and the Gogolin company uses a permanent bulletin board placed in the salesmen's room where a day by day record for each day of the week is displayed for each salesman. The total for the fiscal year is recorded in a separate column on the board. When one salesman notices that another has forged ahead in the record book, he usually makes an extra effort to close the gap in the number of sales made. Mr. Gogolin feels that displaying the sales standing of each salesman has two main advantages: It lets everyone know how well the other fellow is doing, and it creates a friendly competition that he believes to be healthy in any sales organization.

Expediting the Job

Modernization of existing heating systems calls for the fabrication of many specially sized and shaped sheet metal fittings. The company fabricates all of its plenums, transitions, elbows and ducts in its own modern shop. There are enough windows for excellent lighting, and up-to-date tools speed the fabrication of difficult fittings.

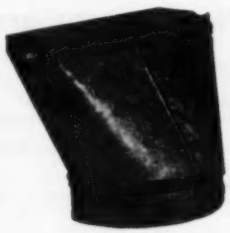
Each sale has a job number which is recorded on a job ticket listing all the material needed to complete the installation. This eliminates unnecessary trips back to the shop for additional fittings. This sheet has separate headings for forced air material, gravity material, return air material, trunkline and fittings, oil and gas fired plenum chambers, round to square hoods and plenum chambers for round casings, refractory material, smoke pipe and miscellaneous material, and special fittings and accessories. Under each heading is listed the quantity and specifications of the material needed. All parts needed are shown on this sheet and are made according to the instructions given by the salesman. Each piece is checked by the installation crew as it loads the truck for the job so that the men will be in a position to complete the installation once they reach the customer.

Throughout the entire operation — from developing the sales lead to completing the installation — each step is performed according to practices that have been developed through experience.

"SNAP-RITE"

PREFABRICATED AIR DUCT AND FITTINGS

. . . a complete, fast-working line for the modern contractor



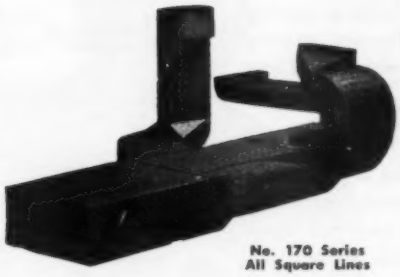
No. 110 BOOT



No. 160 Series
Round Branch Lines



No. 111 BOOT



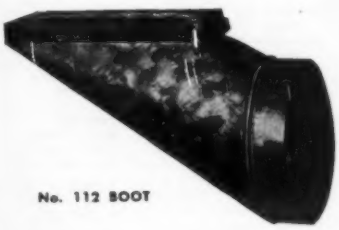
No. 170 Series
All Square Lines



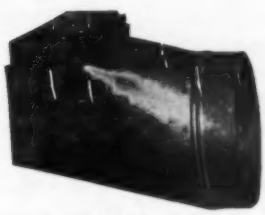
No. 160 Takeoff Round Pipe to carry branch in or below joist.



No. 164 End of Line Center Takeoff. For use with 2 No. 160.



No. 112 BOOT



No. 113 BOOT

In times like these you have to be able to meet competition on an even footing in order to make money and stay in business. One way to be sure you're doing your utmost is to figure your installation jobs with GRAY "Snap-Rite" Fittings. You know then that you have left no stone unturned in your efforts to complete jobs in the quickest manner and with the least amount of difficulty.

Gray "Snap-Rite" Fittings are designed for quick assembly and erection — you can't go wrong when you use "Snap-Rite".

Wall Stack and Fittings in 3¼" standard depths — Trunk Pipe and Fittings in 8" standard depths.

Investigate, too, our complete line of gutter fittings.

GRAY

METAL PRODUCTS, INC.

30 Carlton Street

Rochester 7, New York

WHAT ASSOCIATIONS ARE DOING —

(*Continued from page 203*)

Hull and Stubby Mathews; entertainment, Al Nemec, chairman, Ted Kolbus and Bud Carr; ladies' program, Bill Shirley, chairman, and Howard Tout; hotel, Homer Selch, chairman, Frank E. Anderson and Frank Stewart; publicity, Oscar Mutz, chairman, Tommy Hawks and Frank E. Anderson.

New Address for NHWA

THE NATIONAL Heating Wholesalers Association moved into its new offices the first of this year. The association's headquarters are now located in the Builders Building, Suite 921, at 228 N. LaSalle St., Chicago 1.

Kalamazoo Group Hears Talk on Cooling

SPEAKER at the December meeting of the Kalamazoo Sheet Metal, Roofing, Heating & Air Conditioning Contractors' Association was Ronald Hanzl, residence specialist in summer air conditioning for Carrier Corp. Mr. Hanzl's talk, on the proper application of summer air conditioning equipment, was illustrated with a number of interesting pictures. Speaker at the January meeting was Walter M. Blinks, sales manager, General Gas Light Co.

New York Apprentices Vie for Prizes

THE NEW YORK State Sheet Metal, Roofing & Air Conditioning Contractors Association recently conducted an apprenticeship contest for apprentices with one, two, three or four years of training. The contest was divided into four classes so that contestants would be competing only against other apprentices with similar training and experience. Each contestant submitted his application through his local apprenticeship committee which in turn sent the pattern problem to the apprenticeship committee of the state association.

First year apprentices were assigned an Ogee gutter section to be fabricated from detailed blueprints that specified the dimensions and the gage of metal to be used. Second year apprentices were asked to fabricate a square to round transition from 26 gage galvanized iron; 1 lb rivets were to be used. Third year apprentices were given blueprints of a rectangular duct section with an offset, a branch take-off and 45 deg elbow. Specifications of section and fitting were given for 28 gage galvanized iron. Pittsburgh locks were to be used on the elbow and offset. Corner double seams were specified for the straight length. Joints were to be made of drive cleats for vertical sides with flat S cleats for the horizontal sides. Fourth year apprentices were given a similar duct problem but with additional difficult fittings. Added to this group's problem were two-way transitions, a side take-off from transitions and sharp angle elbows. Cup slips were specified for connecting the main duct sections. All fittings will be judged for their neatness, accuracy and general workmanship.

The grading will be completed and the winners announced in January.

There's an Authorized A-P Service Station Near You

For complete service on A-P oil controls contact the service station in your area.

CALIFORNIA
George T. Hall Company
5625 W. Washington Blvd.
Los Angeles

COLORADO
Instrument Service Company
833 Champa Street
Denver

CONNECTICUT
Bell Pump Service Co.
44 New Britain Avenue
Hartford

Bell Pump Service Co.
750 Congress Avenue
New Haven

FLORIDA
Industrial Equipment Co.
1791 Chicago Avenue
Orlando

ILLINOIS
Robert Barclay, Inc.
1234 Fulton Street
Chicago

Sarn-Oil Burner Supply Co.
2929 South Archer Avenue
Chicago

F. E. Uchison Company
1741 West 69th Street
Chicago

Oil Heat Parts Service
608 LaFayette Avenue
Rockford

INDIANA
G. W. Berkheimer Co., Inc.
1040 Washington Street
Gary

G. W. Berkheimer Co., Inc.
437 South Illinois Street
Indianapolis

Budlock Refrig. Supply Co.
419 N.W. Riverside
Evansville

F. H. Langsenkamp Co.
333 Hydraulic Avenue
South Bend

IOWA
Iowa Electric Motor Service
725 Tuttle Street
Des Moines

Dennis Supply Company
609 Perry Street
Sioux City

MARYLAND
R. E. Michel Company
1011-17 Greenmount Ave.
Baltimore

MASSACHUSETTS
E. L. Kimball Company
1256 Eastern Avenue
Malden

Bell Pump Service Co.
888 Main Street
Springfield

Automatic Heating Supply Co.
185 Redman Street
Fall River

MICHIGAN
Hydraulic & Pump Repair Co.
133 W. 7 Mile Road
Detroit

Krieg Brothers
7824 Charlevoix Avenue
Detroit

MICHIGAN CONTD.
Wholesale Oil & Gas Supply Co.
15843 Harper
Detroit

Miller Product Co.
3045 Rolfe Rd.
Lansing

MINNESOTA
Refrigeration Wholesalers, Inc.
7 North 20th Avenue, West
Duluth

Hardell Heating Supply Co., Inc.
5508-47th Avenue, North
Minneapolis

Refrigeration Supply Co., Inc.
259 West Kellog Blvd.
St. Paul

MISSOURI
Superior Supply Co.
1816-18 Walnut Street
Kansas City

A. G. Brauer Supply Co.
2100 Washington Avenue
St. Louis

NEBRASKA
Dennis Supply Company
2917 Douglas Street
Omaha

NEW JERSEY
Certified Fuel Unit Service
600 Spring Street
Elizabeth

Universal Engineering Co.
344 Wagaraw Road
Hawthorne

Hepco, Inc.
Main Road & Sherman Avenue
South Vineland

NEW YORK
The Capsen Company, Inc.
106 Rogers Avenue
Brooklyn

Certified Fuel Unit Service, Inc.
1018 Central Avenue
Albany

Frontier Oil Refining Corp.
367 Northampton Street
Buffalo

Rochester Oil Burning System
214 Grant Street
Buffalo

Rochester Oil Burning System
116 North Plymouth Avenue
Rochester

Sid Harvey, Inc.
104 East Mineola Avenue
Valley Stream

NORTH CAROLINA
Alley & Rader Services
1006 Webb Avenue
Burlington

OHIO
Ohio Pump Service Co., Inc.
7903 Madison Avenue
Cleveland

OHIO CONTD.
Home Gas & Electric Service
2310 South Avenue at Wayne St.
Toledo

F. E. Winstel Co., Distr.
855 Poplar Street
Cincinnati

OREGON
Oil Circulating Heater Service
4100 S.E. Milwaukie Avenue
Portland

PENNSYLVANIA
Carroll Company
727 Myrtle Street
Erie

Certified Fuel Unit Service
3412 W. Allegheny Street
Philadelphia

RHODE ISLAND
Rhode Island Fuel Pump Service
855 N. Main Street
Providence

TENNESSEE
J. B. Thomas Co., Inc.
1902 Church Street
Nashville

VIRGINIA
R. E. Michel Company
514 South Pine Street
Richmond

Refrigeration Supply Company
1831 West Broad Street
Richmond

Southern Refrigeration Corp.
1850 South Jefferson Street
Roanoke

WASHINGTON
Northwest Pump Service Company
1224 Westlake, North
Seattle

Spokane Washer Company
203 West Main Street
Spokane

Gensco, Inc.
1111 South Tacoma Avenue
Tacoma

Yakima Heating Supply Co.,
18 South 4th Avenue
Yakima

WISCONSIN
Refrigeration Parts Co., Inc.
2532-34 West Fond du Lac Avenue
Milwaukee

CANADA
Pacific Controls Company
1042 Davie Street
Vancouver, B. C.

Michaud & Fils Limitee
4146 St. Denis
Montreal, Quebec

United Refrigerator Parts Co., Ltd.
223 Garry Street
Winnipeg, Canada

These sales-proved A-P accessories add

MORE PROFITS

to your oil heater sales

EVERY oil-burning heating appliance customer is a prospect for these high-profit A-P accessories. Automatic heating, automatic oil lifting and clean fuel oil in the burner . . . they're all advantages that mean extra sales, extra profits for you. So, join the thousands of satisfied dealers all over the country who are cashing in on this profit-packed line. Stock A-P, display A-P and you'll profit with A-P. Write today to — A-P CONTROLS CORPORATION, 2452 N. 32nd St., Milwaukee 45, Wis.

Sell automatic heating



This Thermomatic Comfort Control provides automatic heating with no wiring — no electrical connections. Fits on manual control nameplate. Low in cost . . . no installation . . . no service.



Electric Conversion Kit provides regular room thermostat heat control for vaporizing oil-burner, space heaters and furnaces. Any owner can install. Comes complete with transformer, wire and insulated staples.



Electric Conversion Kit provides simple room thermostat heat control for fan-type heaters. For use either with draft fan or circulating blower on heaters and furnaces. For "on-off" or "high-low" fan speed control.



Exclusive actuating pin on A-P manual oil controls permits quick attachment of all A-P conversion tops for automatic heat control.

Sell automatic oil lifting



Cash in on clean, easy fuel oil handling with an A-P Oilifter. Draws oil from tank or drum located outside or in basement. Delivers it to the third floor, if necessary.

Sell increased efficiency



Cash in on freedom from danger of burner failure due to dirt, moisture or impurities in oil . . . with an A-P Fuel-Oil Trap-It. Eliminates costly service calls by preventing sluggish operation or flame failure due to erratic flow.

A-P CONTROLS CORPORATION

DEPENDABLE *Controls*

For Air • Gases • Refrigerants

In Canada: A-P Controls Corp., Ltd. Cookville, Ontario

For Export: 13 E. Fortieth St., New York 16, N. Y., U.S.A.

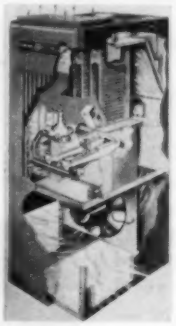
EQUIPMENT DEVELOPMENTS

(*Continued from page 207*)

can be fitted into casement windows without cutting the sash through use of a special optional kit. The series is available for 115 volt, 60 cycle current only. Models project 12⅛ in. into the room, 7⅞ in. outside. The "Custom" series (illustrated), comprising 1, ¾ and ½ hp models, features push button controls grouped behind the left grille, which swings downward. Models are installed in double hung windows. The smallest size is available for 115 volt, 60 cycle current; the next, 115, 208 or 230, 60 cycle current; and the largest, 208 and 230 volt, 60 cycle current. Models project 12⅜ in. into the room, 16 in. outside.

Oil and Gas Fired Furnaces

TWO NEW FURNACES — a horizontal oil fired unit, and a "gravity plus" gas fired furnace (illustrated) — General Electric Co., 5 Lawrence St., Bloomfield, N.J. The horizontal unit, for ceiling suspension, and attic, crawl space or utility room installation, is available in two sizes: Model LB15JH, with an output of 60,000 Btu per hr; and Model LB20 JH, with an output of 85,000 Btu per hr. The other furnace is designed to provide gravity heat with some of the benefits of a forced warm air furnace, the company states. A propeller type booster fan is provided for quicker heat response, and there are low floor to ceiling temperature differentials and good temperature control, according to the manufacturer. A fan and limit switch automatically starts and stops the fan. This gas furnace is available in three models: Model LG10JG, with a 48,000 Btu per hr output; LG20JG, with 72,000 Btu per hr output; and LG25JG, with 96,000 Btu per hr input. The company has also added a new size unit, Model LG15, with a 75,000 Btu per hr output, to its upflow, downflow, and horizontal gas fired lines.



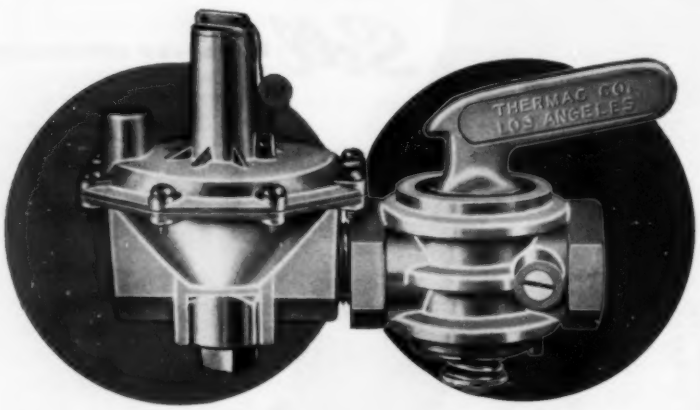


Above: Air Drier

Left: Furnace

Adsorption Air Drier

MODEL 25R ADSORPTION air drier for use in controlled, small premises — Bryant Heater Div., Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10. The unit is intended to reduce the relative humidity in areas from as high as 90 per cent to 8 per cent, accord-



APPLIANCE REGULATOR

Here's the famous Thermac "T" Series Regulator used on millions of gas appliances. Use it now in conjunction with the THERMAC Main Gas Shut-Off Valve.

1. Lower cost per BTU capacity
2. Greater BTU capacity per size
3. Small octangle body easy to install
4. Greater diaphragm sealing area prevents leaks

GAS SHUT-OFF VALVE

Costs considerably less yet it is 2 to 3 times stronger and greater in capacity than ordinary gas control valves. This new Thermac valve, made of special high tensile aluminum alloy long proved in aircraft practice won't gall or stick. Valve rotor is treated with a hard facing and special long life lubricant. Pilot gas take-off may be provided on either side.

Appliance manufacturers are invited to request samples and quantity prices.

Certified by A.G.A.

Thermac *NOW* offers you these 2 products

Use Thermac Regulators and Shut-Off Valves together for greater economy.

THERMAC

THERMAC COMPANY

800 East 108th St.

LOS ANGELES 59, CALIF.



ECONOMY



QUALITY



DE LUXE



atlas
BOILER JACKETS
3
WAY WINNERS

ATLAS Boiler Jackets offer three important advantages to the manufacturer:

1. ATLAS special construction and low prices will reduce costs.
2. They will enhance the appearance of your product.
3. Improved product appearance will improve your sales.

ATLAS boiler jackets are custom-built to manufacturers' dimensional specifications. Jackets are of heavy gauge steel, with baked enamel finish and ready to install. No tooling costs are necessary on the three basic styles illustrated. ATLAS flush type boiler jackets are available in three types of construction.

Choose "ECONOMY" square-cornered jackets for cost saving, "QUALITY" with round cornered top for competitive pricing plus appearance, or "DE-LUXE" with fully round corners for your select dealer trade. You'll find any of the three the ultimate in appearance and value.

ATLAS also manufactures cabinets for heating, cooling and air conditioning units. For cost estimates, send specifications and requirements to:

Atlas
MANUFACTURING COMPANY
EUSTIS AT ROBBINS ST. • ST. PAUL, MINN.

ing to the company. It is plugged directly into a 115 volt electric circuit, and may be controlled by a standard humidistat. No drains or other connections are required. Damp room air passes through a bed of silica gel, being dehumidified in the process.

The reactivation of the silica gel beds is accomplished by the use of a small electric heater and a supply of outside air which is passed over the bed before it is again used for dehumidifying. Due to the construction of the equipment, the reactivation cycle is continuous. The outside air not only removes the moisture from the beds being reactivated, but also cools them.

Heat Exchanger for Winter Air Conditioners

"DURA-TUBE" heat exchanger, designed for long life, for use in 1954 "deluxe" model winter air conditioners — Janitrol Div., Surface Combustion Corp., Columbus 16. The heat exchanger uses a combination of the company's former design and a special process developed by the National Bureau of Standards during World War II to protect military aircraft from destructive high temperatures. The heat exchanger is AGA rated to withstand a normal heating temperature of 1100 F. The unit maximum temperature, however, is kept below 800 F. In tests completed by the Bureau of Standards, equipment made by the process used in these units has withstood quick chilling from 1200 F, by immersion in water, without cracking. The new heat exchanger is a one piece, gastight unit designed to eliminate leakage by combustion gases into the circulating air and to resist the combustion gases that tend to corrode.

Portable Space Heater

"PRAIRIE SCHOONER" portable heater, a horizontal furnace with stainless steel combustion chamber and standard "Micro-Mix" oil burner, designed to deliver 220,000 Btu per hr, vented — The Lennox Furnace Co., 200 S. 12th Ave., Marshalltown, Ia. Capacity is correspondingly higher if the unit is not vented.



Space Heater


Window Conditioner

Window Conditioners with Heating Element

WINDOW TYPE room air conditioners with integral auxiliary heating element, in ½, ¾ and 1 hp sizes — Perfection Stove Co., 7609 Platt Ave., Cleveland 4. Units cool, reduce humidity and dampness, warm the

IT'S EASY AND PROFITABLE . . .

to install
ZONE CONTROL SYSTEMS
with CRISE ZONETROL UNITS



PUT HEAT WHERE IT'S NEEDED, WHEN IT'S NEEDED . . . AT LOWEST POSSIBLE COST!

The Crise Zonetrol is the first self-contained, fully operable unit to be offered for zone control in forced warm air and air conditioning systems.

It incorporates two distinct advantages that save your customers money, make money for you

(1) The Crise Zonetrol includes a line voltage motor with a secondary built-in low voltage control circuit. *This eliminates the need for an extra transformer.*

(2) Each Zonetrol is complete in itself and any reasonable number of these units (two or more) can be used to control as many zones as may be desired. *No master zone control motor is required*

These exclusive features mean *lower cost*, both in units and in installation. They add up to less selling resistance and consequently more zone control jobs for you.

Get full facts now on Crise Zonetrol Units. Cash in on the demand for zone control systems by being the first to offer these better, inexpensive units. Write for bulletin.

CRISE CONTROLS DIVISION
ACRO MANUFACTURING COMPANY
COLUMBUS 16, OHIO

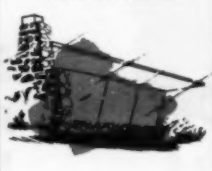
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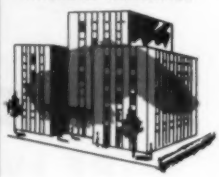
INVALID'S ROOM



EXPOSED ROOMS



MULTIPLE DWELLINGS



The Leaders!

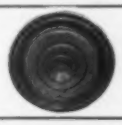
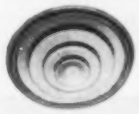
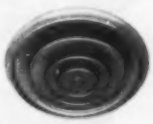
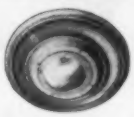
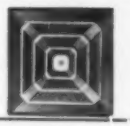
in style, quality and economy

AIR DISTRIBUTION

CARNES

A DIFFUSER FOR EVERY REQUIREMENT

Yes, Carnes leads with a line of diffusers that's way ahead! *You've told us* what you wanted . . . and we have incorporated all the *best* ideas, all the *newest* developments that engineers and architects demand. Beautiful styling, easy installation, and complete adjustability for all air patterns, plus quiet operation. And remember . . .Carnes is *top quality* at *low price* that will save you real money! Your best bet *is Carnes!*

MODEL		NECK SIZES	C F M OUTPUT	DESCRIPTION	
E-1	Supply only fixed cone	5 to 32	50 to 13,400	A flush mounting diffuser designed primarily for exposed duct applications or where obstructions make recessed mounting impossible. The set pattern is for horizontal throw.	
E **EJ** **ER**	Supply only fixed cone Supply only adjustable cone Supply and return fixed cone	5 to 32	50 to 13,400	This expanded cone diffuser is constructed with the same number of cones in all styles or sizes giving a uniform appearance when various styles or sizes are used in the same area. The fixed cone model "E" can be set for vertical or horizontal pattern.	
BR **BRS**	Supply only adjustable cones Supply and return adjustable cones	6 to 32	115 to 13,400	A beautifully styled multicone diffuser featuring easy installation and simple adjustment for various air patterns desired. Available with a full line of accessories to make balancing the system a simple matter.	
EH	Half Round supply only fixed cone	6 to 20	50 to 2,725	The model EH is styled along the identical lines of the other series E models. A unique feature of this diffuser is that the inner vane assembly can be set for either horizontal or vertical air pattern which makes it adaptable for either ceiling or sidewall installations.	
QSL	Combination diffuser and lighting fixture adjustable	8 to 17	210 to 2,670	The model QSL combination diffuser and light is designed to harmonize in appearance with either the model E series or the BR and BRS. The cone assembly can be set for any of three positions for horizontal, vertical or intermediate air patterns.	
SFS **SFR**	Supply only surface type fixed cone Supply only recessed type fixed cone	8 x 8 to 20 x 20	150 to 6,925	These square and rectangular diffusers with the corner air scoops give a full 360° air pattern, thus giving round diffuser performance from a square or rectangular unit. Available in both recessed and flush mountings and with a full set of accessories.	

Write today for Carnes descriptive literature, selection charts and engineering data!

CARNES The Most Talked About Name in Air Distribution

W. R. CARNES CO., VERONA, WISCONSIN

room in chilly weather, filter the air, exhaust stale air, and ventilate quickly, the company states. The thermostat is built in. Four adjustable grilles direct the flow of air. A casement window adapter also is available.

Damper for Baseboard Diffuser

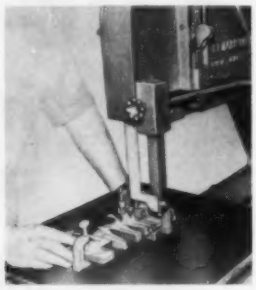
SEPARATE DAMPER for installation with the Series 180 baseboard perimeter diffusers — Air Control Products, Inc., Coopersville, Mich. Available as an extra, it is designed to provide exact control of the air volume and to permit the system to be balanced at the diffuser face. Spring loaded hinges prevent the damper from closing accidentally. Air volume is controlled by an operator chain held in place by a chain lock disc attached to the front of the diffuser. A balancing bell permits the damper to be stopped at any open position. The damper is available to fit either a 2¼ × 12 in., or 2¼ × 14 in. opening. It can be installed single or in multiple.

Room Exhauster

MODEL KA-17 "Kitchen-Aire" high capacity, three speed ventilating fan for homes and small business structures — Stewart Mfg. Co., Inc., 318-X East St. Joseph St., Indianapolis.

It can be used to ventilate a combination of rooms. For example, one grille may be placed above the stove, another over a wall oven in the kitchen and a third in the bathroom. The unit may be wall or roof mounted. The fan operates at 800, 400 and 200 cfm.





Above: Room Exhauster

Right: Band Saw

Band Saw

MODEL 24S three wheel band saw with a 24 in. throat, especially designed for cutting stacked sheet metal — Bett-Marr Mfg. Co., Hopkins, Minn. The saw is 61 in. high, and will allow center cutting on sheets up to 48 in., the company states. The variable speed control makes it adaptable for cutting iron, steel, forgings, aluminum, bronze, brass, copper, wood, plastics and stainless steel. The company guarantees that the blade will stay in position on the wheel.

Insulation Blowing Machine

"UNI-MATIC" automatic insulation blowing machine, designed to save time and material, which features a choice

Best FOR SERVICE... Best FOR CUSTOMERS
General FUEL OIL FILTERS

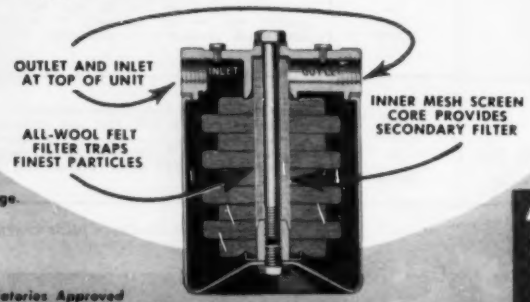
STANDARD MODEL 1A-25



Veteran oil burner servicemen call *General* Fuel Oil Filters "the best money can buy." Two-fold, positive filtering removes the finest particles, improves operation of oil-fired furnaces, water heaters, space heaters. Service "call-backs" are eliminated, too, since the General 1A-25 and 2A-700 allow only *clean* oils to pass—greatly reducing possibilities of clogged burner nozzles.

MASTER MODEL 2A-700





- Finest filtration
- Easily replaced *all-wool* cartridge.
- Clogged fuel lines eliminated.
- Compact — easy to install.
- Double protection filter design.

General Filters Are Underwriters' Laboratories Approved

Remember —Plugged flues cost heating dollars! CLEAN RIGHT Soot Remover removes a ½" layer of soot in 2-3 minutes . . . safely and thoroughly. Made for General Filters, Inc.

GENERAL FILTERS INCORPORATED **GENERAL FUEL OIL FILTERS** 43800 GRAND RIVER AVE. NOVI, MICHIGAN

Canadian Factory Branch: Canadian General Filters, Ltd., 2679 Danforth Avenue, Toronto 13, Ontario

HE—56


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STREAMLINE DESIGN • LESS AIR RESISTANCE • LESS AIR LEAKAGE!
There's a reason why Lamneck Fittings have less air resistance and leakage than others. That reason is bucause Lamneck Fittings are factory fabricated to match accurately, so as to always give you a snug tight fit.
Besides making a handsome efficient job every time, Lamneck saves you money . . . up to 30% in materials and labor!
Lamneck jobs figure faster, go together quicker and consistently make better installations. Insist upon Lamneck on your next job!
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equipment developments . . .

of several usable operating speeds and remote control of the mechanism by the hose man — Universal Insulating Co., Dept. 11, 333 S. Walnut St., Van Wert, Ohio. It employs a four speed conveyor metering system which automatically feeds a predetermined amount of material to the shredder. This is designed to assure effective shredding and aeration of all fibers and to make possible economical blowing with control of depth uniformity.

Shaded Pole Motor

MODEL 2800 SHADED POLE motor in five different lengths for various output powers — Howard Industries, Inc., 1760 State St., Racine. As a pancake style motor, the unit has two drawn hardened steel housings that telescope over the stator. Completely housed, the model has a three piece zinc die cast housing. Both styles can be supplied with either open or closed construction. Speed at full load is 1500 rpm. The motor operates on 115 volt current. It is available in 1/100, 1/70, 1/50, 1/40 and 1/30 hp models.

Attic and Wall Exhaust Fans

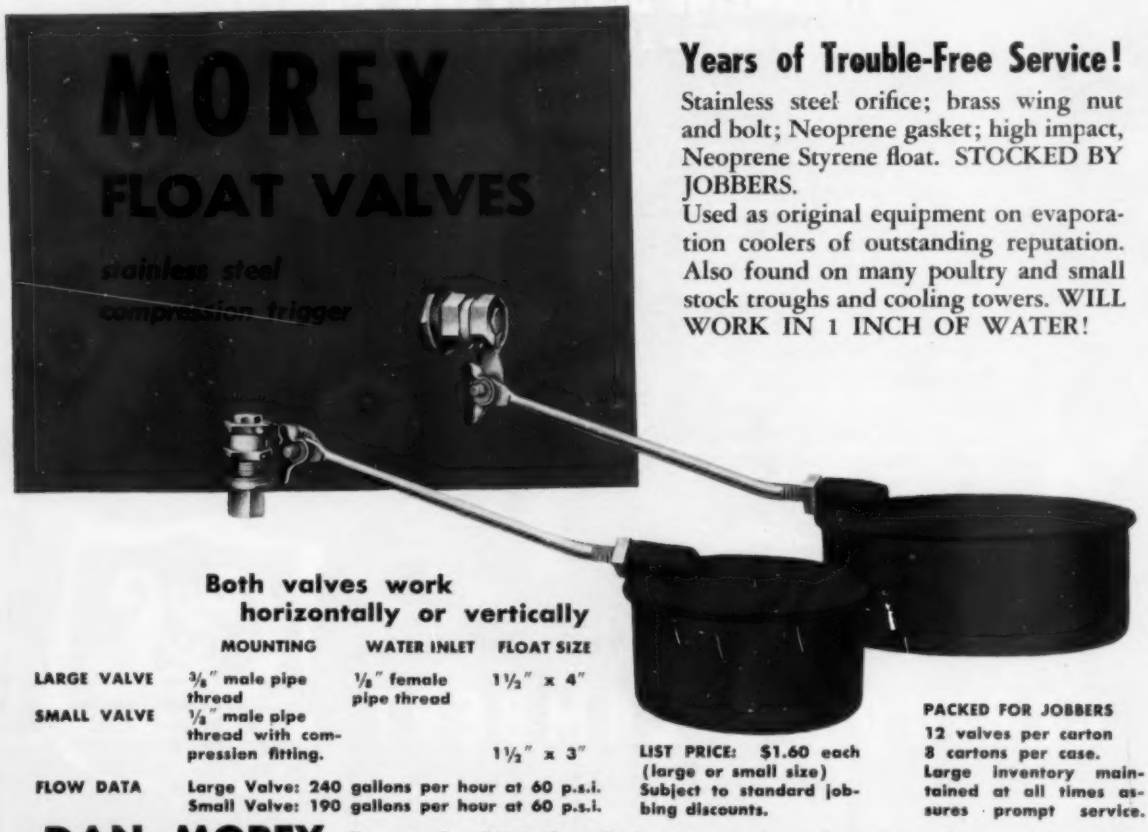
Two "Windmaker" 1 hp, 54 in. fans, delivering 25,000 cfm, one for attic installation and the other for vertical use as a wall exhaust fan — Phil Rich Fan Mfg. Co., 2900 Caroline St., Houston 4. Both have venturi frames, are rubber mounted, have sealed ball bearings and welded construction throughout. The fans are designed to move a large volume of air at a relatively low running speed.

Summer Air Conditioning Units

TWO NEW summer air conditioning units: a lightweight duct air conditioner, and a re-designed room cooler — Bryant Heater Div., Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10. The Model 581 duct



air conditioner (shown) is designed for installation in restricted attic, basement, or crawl space locations. It is 22 in. wide and weighs 270 lb. Available in 2 and



Years of Trouble-Free Service!

Stainless steel orifice; brass wing nut and bolt; Neoprene gasket; high impact, Neoprene Styrene float. STOCKED BY JOBBERS.

Used as original equipment on evaporation coolers of outstanding reputation. Also found on many poultry and small stock troughs and cooling towers. WILL WORK IN 1 INCH OF WATER!

Both valves work horizontally or vertically

	MOUNTING	WATER INLET	FLOAT SIZE
LARGE VALVE	3/8" male pipe thread	1/8" female pipe thread	1 1/2" x 4"
SMALL VALVE	1/8" male pipe thread with compression fitting.		1 1/2" x 3"
FLOW DATA	Large Valve: 240 gallons per hour at 60 p.s.i. Small Valve: 190 gallons per hour at 60 p.s.i.		

LIST PRICE: $1.60 each (large or small size) Subject to standard jobbing discounts.

PACKED FOR JOBBERS
12 valves per carton
8 cartons per case.
Large inventory maintained at all times assures prompt service.

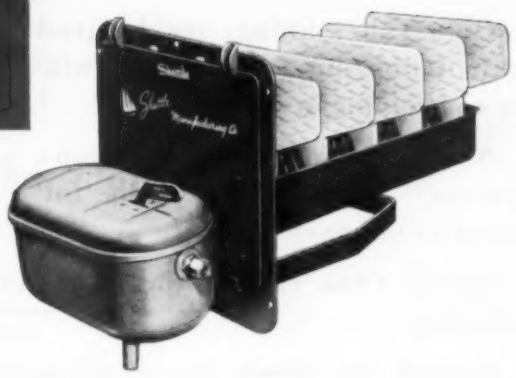
DAN MOREY Dept. A, 814 So. Robertson, Los Angeles 35, California

NOW there is a Skuttle Humidifier for every home

Skuttle—the leader in humidification—has forged ahead again. Now Skuttle offers the *only* complete line of humidifiers . . . to meet the needs of *every* home . . . with any type heating plant. Warm air . . . winter air conditioning . . . space heater . . . steam . . . hot water . . . vapor . . . there is a Skuttle to do the job . . . better.

Here's the complete line—and remember, valves, floats and other operating parts are interchangeable, reducing *your* stock.

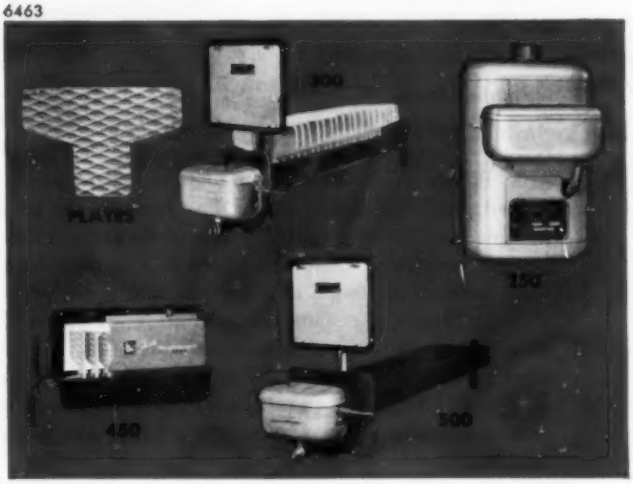
Skuttle
MANUFACTURING COMPANY
MILFORD, MICHIGAN



Skuttle Series 600

The most popular humidifier for many years. For all standard type automatic fired warm air furnaces, including gravity and winter air conditioning. Easily installed. Self-flushing—self-cleaning. Patented Vapoglas plates for efficient evaporation. Blown glass float—can't leak. Chrome and nickel plated valve parts—aluminum plate rack to eliminate electronic corrosion. Double coated acid and alkali resisting porcelain enamel pan and float chamber.

6463



Skuttle Model 450

For warm air furnaces where space doesn't permit a Series 600. Model 450 can be used if there is 3" space between furnace and casing—counterflow—floor and other furnaces and space heaters.

Skuttle Model 250—Gas Fired

Independently gas fired for steam, hot water and perimeter heated homes.

Skuttle Series 300 for Large Homes

Holds up to 35 Vapoglas plates—for large homes.

Skuttle Series 500 for Coal Fired Warm Air Heat

Needs no plates—for use in high temperature plenums.

Patented Vapoglas Evaporating Plates

Pure glass wool compressed under heat. The most efficient plate you can get. All evaporating plates should be replaced when clogged with water chemicals—about once a year.



The best homes will be cooled in the summer with the same air-distribution system that is heating them now.

Ohio Valley fittings are designed to do double duty — heating in winter and cooling in summer.

Now is the time to sell year-'round systems. Winter's cold will be followed by summer's heat.

Specify Ohio Valley fittings when ordering.

Carried in Stock by Leading Wholesalers.



Ohio Valley Hardware & Roofing Company
METAL MANUFACTURING DIVISION, EVANSVILLE, IND.

equipment developments . . .

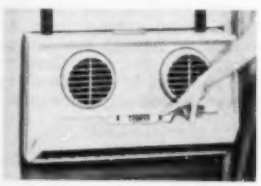
3 ton sizes, it is equipped with a complete hermetic refrigeration system. It can be installed in conjunction with a forced air furnace. The Model 554 room conditioner features a discharge grille that allows 360 deg control; more flexible operating controls, providing for four separate adjustments of room climate; a complete hermetic compressor; a large condenser coil; and double and triple row cooling coils.

High Pressure Fan

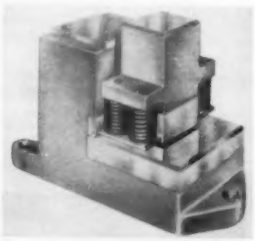
HIGH PRESSURE ventilating fan designed to operate against pressures as high as 4 in. — Hartzell Propeller Fan Co., Div., Castle Hills Corp., 1025 Roosevelt Ave., Piqua, Ohio. It is available in 28, 36, and 48 in. models. The new propeller features a curved orifice "Air-Seal" ring, which increases air deliveries 10 per cent or more by eliminating backflow of air at the propeller tips, according to the manufacturer. The propeller is sand-cast aluminum.

Window Conditioner with Heating Element

IMPROVED "VORNADO" 1 hp window type room air conditioner, now incorporating a winter heating element and push button controls — O. A. Sutton Corp., 1812 W. 2nd St., Wichita 2. The push button on the front of the unit operates electric solenoids that automatically give the operation and capacity desired. The warmer preheats outside air to room temperature, is designed for use in chilly weather. The conditioner is intended to cool an area of 600 sq ft; operations include cooling, preheating, ventilating, circulating dehumidifying, filtering and exhausting. Air moving capacity is 1600 fpm.



Above: Window Conditioner



Right: Notching Unit

Notching Units

NEW LINE of notching units in both open and confined types — Toolset Div., General Riveters, Inc., 777 Hertel Ave., Buffalo 7. Units are self contained, permanently aligned punches and dies designed to eliminate the need for any attachments to the upper ram of the press. Lifter springs, punch and die are contained in a single holder. Units have a shut height of 6 5/16 in. and a die height of 2 19/32 in. The units can be quickly set up on T slotted plates or templates mounted in or out of the press, the company states. Punch sizes, available in both types, are 2 × 2, 3 × 3, and 5 × 5 in. Standard units are available for corner, 90 deg V's and angle notching.

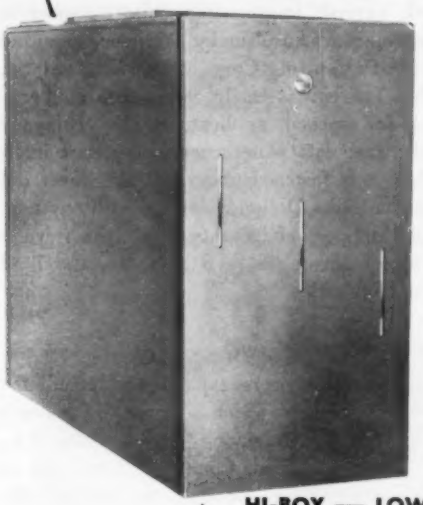
Superior

Air Conditioners and Warm Air Furnaces

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Summer and Winter

AIR CONDITIONING



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RESIDENTIAL AND COMMERCIAL INSTALLATIONS

COMPACT — COMPLETELY AUTOMATIC

DESIGNED FOR MINIMUM SPACE

COMPLETE LINE of

2-3-5 Ton Air Conditioners

Gas and Oil

HI-BOY — LOW-BOY — COUNTERFLO — GRAVITY — SUSPENDED UNITS

FROM 60,000 BTU to 400,000 BTU

Superior **FURNACE & MANUFACTURING CO.**

322 HAMILTON AVENUE PLYMOUTH, MICHIGAN

The finest Elbows on the market carry this

TRADE *F. Dieckmann* MARK

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The line is complete and the prices are right. Dieckmann makes elbows for every angle and of every standard size, style and metal. Plain round, corrugated round and square styles A and B. Hot-dipped galvanized after formation.

Your jobber carries Dieckmann elbows and shoes with the Dieckmann trademark to guarantee quality and service. *WRITE FOR COMPLETE CATALOG.*



THE FERDINAND DIECKMANN COMPANY

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AGITAIR

For correct air distribution to suit any space condition, AGITAIR square and rectangular diffusers have no equal. Custom-designed with built-in diffusing vanes, in a wide variety of louver patterns, they provide blows in 1, 2, 3 or 4 directions without use of blank-offs. AGITAIR diffusers need not be centrally located in the area to be served.

Advantages of AGITAIR'S exclusive air pattern control feature are greater design freedom for achitects and engineers, certified 100% draftless air distribution from any ceiling or sidewall location, maximum economy in duct runs.

New 34-page Type R Catalog reveals how correct air distribution is simplified by AGITAIR. Contact your local AGITAIR representative, or write us direct for your free copy.



AIR DEVICES INC.
185 Madison Avenue, New York 16, N. Y.

AIR DIFFUSERS • FILTERS • EXHAUSTERS

equipment developments . . .

Solenoid Valve

IMPROVED MODEL 73 solenoid valve, incorporating double dipped, varnish impregnated coils designed to assure efficient performance under extreme humidity conditions — A-P Controls Corp., 2450 N. 32nd St., Milwaukee 45. The coil is easily changed to suit voltages required for special applications, the company states. An electrical data plate accompanies each interchangeable coil; it is fastened under the coil cover nut when a coil is changed. Designed for use with any noncorrosive liquid and for refrigerants or air, the valve is available in three orifice sizes — 5/32, 3/16, and 7/32 in., and in four body styles.

Air Cooled Condensers

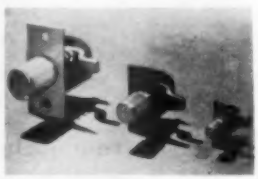
LINE OF replacement condensers, expanded to include the fan and condenser assembly, which is designed for lower maintenance cost and water saving — Bush Mfg. Co., 179 South St., West Hartford, Conn. An inner fin in the condenser surface makes possible the greater efficiency per row of tubing, the company states. The units utilize propeller type fans and are available in 2, 3, and 5 ton capacities.

Plastic Enclosed Thermostat

PLASTIC ENCLOSED "Thermoswitch" thermostats for severe humidity and corrosion service — Fenwal Inc., Ashland, Mass. Applications include plating baths, humidity and corrosion testing chambers, refrigerated rooms, and cabinets where condensed moisture is a problem, etc. It can be set to operate at any temperature within a range of 10 to 165 F and can handle a current load of 10 amp at 115 volts a-c or 5 amp and 230 volts a-c. Overall length, including the enclosure, varies between 5¼ and 7½ in. The lower end of the enclosure (at left in illustration) can be cylindrical or flattened (with integral ¾ in. grommet for suspending the thermostat from a hook or wire).



Above: Thermostat



Right: Pawl Fasteners

Adjustable Pawl Fasteners

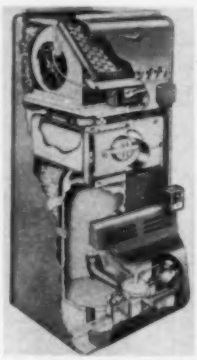
ADJUSTABLE PAWL FASTENERS for quarter-turn closure of opening of hinged doors and panels on machinery and equipment, now offered in three sizes and head styles — Southco Div., South Chester Corp., Lester, Pa. Two types of pawl adjustment are provided: the adjustable pawl, which tightens or loosens contact with the door jamb with additional turning on the head, and the fixed pawl, preset at installation to the desired contact gap and tension. Knurled knob and T bar style heads are offered

equipment developments . . .

for hand operation, and a slotted flush head is made for screwdriver operation.

Counterflow Furnace

MODEL CFG-1 gas fired counterflow furnace, for use in one story basementless homes, which provides an input rating of 100,000 Btu per hr — The Heil Co., 3000 W. Montana St., Milwaukee 1. The unit requires a little over 2 sq ft of floor area. It is AGA approved for installation on wood flooring within 1 in. of combustible walls, and is, therefore, recommended by the company for closet or alcove installation. Features include a "Quin-Rad" heat exchanger and a 20 gage steel jacket with rounded corners.





Above: Room Unit

Left: Furnace

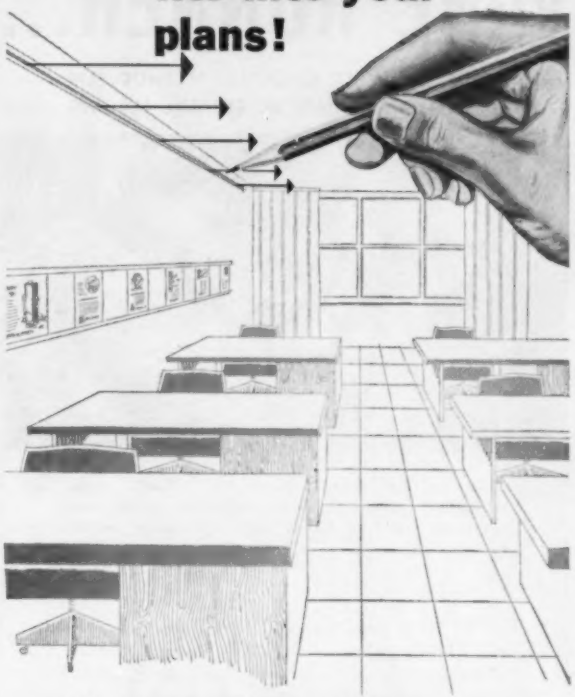
Console and Window Type Room Units

NEW 1½ HP console type room unit (illustrated), and a new line of window type units — Air Conditioning Div., Remington Corp., Auburn, N.Y. The console is equipped with a thermostat that controls cooling and heating; the unit provides heating on chilly days which occur before central heating is used in the fall, and after it is turned off in the spring. Approximate dimensions of both water and air cooled models are 37 in. wide, 38 in. high, 21 in. in deep. The window units feature a ½ hp "deluxe" unit with automatic temperature control, two-speed fans, optional heating, odor control, and other improvements. Also included in the line are standard 1/3, ½, ¾ and 1 hp units.

Cold Galvanizing Compound

COLD GALVANIZING compound which may be applied with a paint brush, electric spray gun or by cold dipping wherever rust occurs in machines, equipment or outside installations — Galvicon Corp., 40 W. 29th St., New York 1. Iron or steel surfaces coated with the compound create an electro-chemical union, uniting the zinc with the base metal's surface. The compound combines with the base metal, setting up electrical continuity, the company states. It is designed to leave a coating, in excess of 96 parts by weight, of chemically pure zinc. In instances where the compound is applied onto adhering rust, it induces the rusted area to create its own non-flaking coating, stopping any further rust, according to the man-

See how inconspicuously STRIPLINE fits into your plans!



Unlimited air distribution provided by slender continuous diffusers ...another AGITAIR first!

Stripline diffusers offer complete application versatility. They are ideal for installation in shallow lighting coves...window stools for air curtaining of glass windows or exposed wall areas...side of furred beams... or as a decorative border blanketing the entire area with noiseless, draftless air distribution. Custom built with AGITAIR's patented diffusing vanes, Stripline diffusers create maximum mixing and aspiration... quick temperature equalization and correct air distribution over any desired length.

Write for your free copy of Catalog S-100 today.

AGITAIR STRIPLINE

AIR DEVICES INC.

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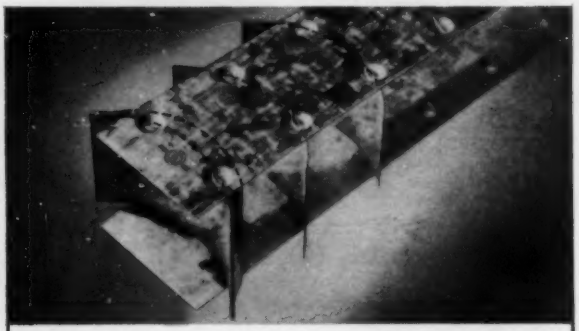
AIR DIFFUSERS • FILTERS • EXHAUSTERS

Absolutely without equal!

ALL-TITE VANE RUNNER...

TRADE MARK

YOUR QUICKEST, CHEAPEST METHOD FOR INSTALLING VANES IN SQUARE ELBOWS



Blades are cut raw from your scrap... double blades formed with flanges as shown above. For elbows more than three feet high, two or more units can be stacked. For additional length on vane runners, overlap two pieces.

"WE FIND it the simplest, fastest, most economical way of fabricating and installing turning vanes"... "Your runner has cut our cost of installing vanes by 50%"..."We've ordered and reordered for all types of jobs." Those are the things that sheet metal contractors are saying about the *All-Tite Vane Runner* —and orders are pouring in!

The new, improved *Elgen All-Tite Vane Runner* with its unique slotted knobs is made of 24-gauge galvanized steel, engineer-approved to accommodate either single or double blades. It eliminates punching, notching, riveting, spotwelding and layout... *requires no special chisels or tools.* Vanes are locked in a jiffy with shears or hammer. Assembled unit is quickly fitted in elbow, fastened with screws, and is completely rigid and rattleproof.

The *Elgen All-Tite Vane Runner* comes in 8-foot lengths, 20 strips per bundle. Order from your jobber for top efficiency and real savings... if necessary, ask us for your quickest source of supply. And write us for full information and engineering data.

PAT. PEND. UNION MADE

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Elgen Mfg. Corp., Dept. A, 41-34 39th St., Long Island City 4, New York.

ELGEN

ALL-TITE VANE RUNNERS

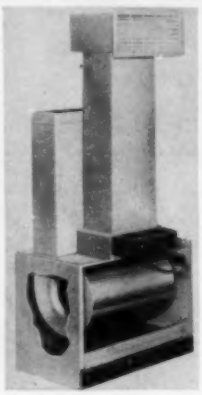
FASTEST... MORE PRACTICAL AND ECONOMICAL

equipment developments . . .

ufacturer. The manufacturing process involves the micro-grinding of zinc so that particles used are a fraction is size of the finest zinc dust.

Kitchen Ventilator

MODEL 3501 kitchen ventilator (for installation in a cabinet over the range) with redesigned blower assembly — Trade-Wind Motorfans, Inc., 5725 S. Main St., Los Angeles 37. A completely redesigned scroll houses the motor and blower units. It is made as a "wrap-around" assembly, with the motor and blower components and spacers inserted in the forming process. This has improved the performance of the equipment, the company states. The model also incorporates a new four speed switch control which is installed in a standard double outlet box and provides speed changes through four progressive steps from a minimum useful discharge to the full capacity of more than 550 cfm. The model is also equipped with two inlets and filters, one above the stove and a second at ceiling level. It can be installed in any cabinet providing a clear space of 18½ in. wide, 16 in. high and 11½ in. deep.





Above: Unit Heater

Left: Kitchen Ventilator

Gas Fired Unit Heater

"SPEED HEATER" ceiling suspended, gas fired unit heater which operates independently of a central heating plant and requires only electrical, gas and flue connections for operation — Westinghouse Electric Corp., Air Conditioning Div., Dept. T-401, 200 Readville St., Hyde Park, Boston 30. It can be used with all types of gases: natural, manufactured, or liquefied petroleum. Featured are a slow speed motor and a fan designed for quiet operation. The heat exchanger tubes are constructed of corrosion-resistant aluminized steel. Louvers are adjustable. Seven sizes range in capacity from 25,000 to 200,000 Btu per hr.

Window Conditioners with Heating Element

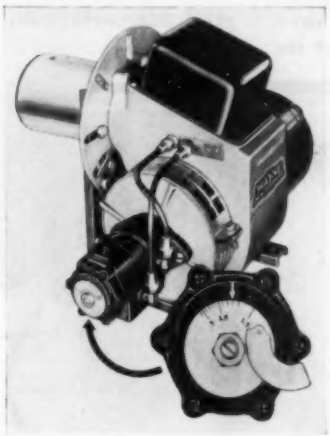
WINDOW TYPE room air conditioners with integral auxiliary heatng element, in ½, ¾ and 1 hp sizes — Amana Refrigeration, Inc., Amana, Ia. The units deliver six different combinations of cooling, heating and ventilation,

each of which may be selected by adjusting one horizontal glider control. All models are equipped with thermostats. When not in use, the illuminated, color-coded glider control is hidden. Units may be installed in any of 18 positions, ranging from flush mounted with the window and almost fully outside the room to fully inside the room. Intake and exhaust louvers are at the back end of the cabinets, eliminating side louvers.

The fiber glass filter is the replaceable type. The ½ hp unit operates on a standard 115 volt line; the ¾ hp, on 115 or 230 volts; the 1 hp, on 230 volts only.

Low Pressure Oil Burner with Dial Adjustment

MODEL EL low pressure "Dial-O-Meter" oil burner, incorporating a calibrated dial which provides a visible means of setting oil and air capacity while firing the



burner — Wayne Home Equipment Co., Inc., 801 Glasgow Ave., Fort Wayne 4. Secondary air adjustment is effected with a screw driver to clean up the flame. The dial has a calibrated range of 0.4 to 1.5 gph.

Cooling-Heating Unit

AIR CONDITIONING unit for use in a variety of home and small commercial installations — Refrigeration Div., Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 20. It can be used for all types of remote, duct type cooling; for heating, it is attached to any modern home heating plant or it can be fitted with steam or hot water coils. When a combination conditioner and furnace is needed, an AGA approved gas heating unit fits on top of the basic unit. The unit requires 7 sq ft of floor space.

Hydraulic Assist for Foot Shears

SELF-CONTAINED hydraulic assist mechanism for application to a line of foot operated shears — Barth Engineering & Mfg. Co., Milldale, Conn. The "booster" is easily adaptable to shears already in use, the company states. With the mechanism, the shear may be stopped in any

NOW...save time and slash costs with the new

SILENT DUCT

TRADE MARK

METAL AND MATERIAL ALL IN ONE UNIT



HERE'S THE FIRST really important improvement that's come to you in years... *Elgen Silent Duct*, the modern flexible duct connection that abolishes vibration noise in furnaces, blowers, air conditioners and attic fans. Factory-assembled into a single rugged unit, *Silent Duct* does away with the old-fashioned time-wasting need for attaching woven fabric to metal in your own shop... saves you up to 60% of the cost of fabricating flexible connections!

Elgen Silent Duct is delivered in 100-foot (approx.) coils in a handy dispenser and *pulls out flat*, ready to use. It is made of 24-gauge galvanized steel fastened to long-life canvas* with top resistance to fire, water and mildew... and it's also available with heavy, top quality, non-porous asbestos.

Order *Silent Duct* from your jobber and start saving time and money that really count... if necessary, ask us for your quickest source of supply. And write us for literature that tells the whole story.

Elgen Manufacturing Corp., Dept. A, 41-34 39th St., Long Island City 4, New York.

*Made under Govt. Spec. MIL-D-10860



HOW TO FABRICATE SILENT DUCT

1. Stand dispenser against bench.
2. Pull out required amount of Silent Duct.
3. Cut with shears.
4. Bend as required.
5. Seam by any desired method.

PAT. PEND.
UNION MADE

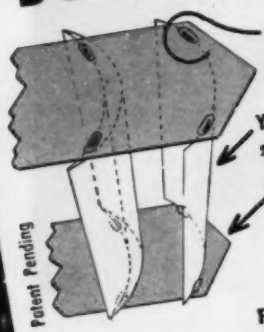
A. F. of L.

ELGEN

SILENT DUCT

SAVES MAKING YOUR OWN FLEXIBLE CONNECTIONS

Save money making
AIR TURNING VANES
Single or Double Blade... for Square Elbows
with the New Engineer Approved
"DURO-VANE-RAIL"
Trade Mark



Patent Pending

ONE hammer blow secures Blade with positive lock, rattle free

YOU make Blades of scrap. Cut square, no notching.

"DURO-VANE-RAIL" supplied in 8 foot lengths.

WRITE TODAY
For folder on how to make Engineer Approved Air Turning Vanes using "DURO-VANE-RAIL"

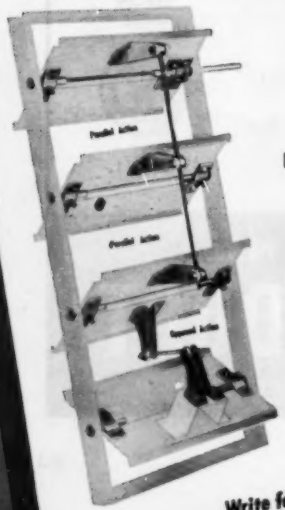
Save Money
Save Time

DEPT. 14

DURO-DYNE
CORPORATION
38 South Franklin Street,
Hempstead, L. I., N. Y.

Save money on Multi-blade DAMPERS

Make your Dampers with
"DURO BLADE KIT"



PRECISION-ENGINEERED
DAMPER HARDWARE

Note Parallel
OR Opposed blade action
• Each blade quickly adjustable
• Tilting brackets line up automatically After Installation (can use inexperienced labor)

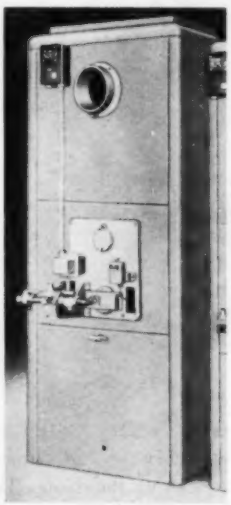
Write for Samples & Prices DEPT. 15

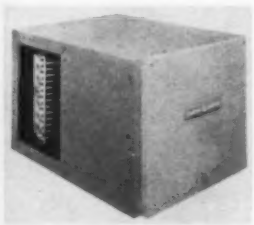
equipment developments . . .

position without jolting and without fear of injury to the operator or damage to the material, according to the manufacturer.

Redesigned Furnaces

1954 LINE of furnaces featuring higher efficiency burners, new insulation and redesigned casings — The Majestic Co., Inc., 733 Erie St., Huntington, Ind. Models D-22 and U-22 now have a rated output of 76,000 Btu, compared with the previous 65,000 Btu; the units remain 22 in. square. Other new ratings are 100,000 Btu for the 26 in. square model and 128,000 Btu for the 30 in. square model. All models are AGA approved for both natural and mixed gas and an AGA listed LP conversion burner is available. Oil burners also are offered for all models. Casings have been redesigned so that all corners have been rounded and heavier gage steel is used in the heat exchangers. All units are insulated with ½ in. foil faced spun glass which is glued and mechanically fastened to the inside of the casing.





Above: Cooling Unit

Left: Furnace

Home Cooling Equipment

NEW LINE of home cooling equipment featuring an air cooled counterpart for every water cooled unit — General Electric Co., 5 Lawrence St., Bloomfield, N.J. The line is intended to reduce installation costs and provide more flexibility of application. A new downflow unit designed for houses on slab foundations will be available in four sizes, including 1½, 2, 2½ and 3 ton capacities. The horizontal cooling units (illustrated), designed primarily for homes with crawl spaces or large attics, are available in the same four sizes.

Manual Reset Thermostat

"UNI-THERM" THERMOSTAT designed primarily as a high limit cutout that instantaneously snaps off at a predetermined temperature and will not remake until the reset button is pushed — Westinghouse Electric Corp., P.O. Box 2099, Pittsburgh 30. Applications include air con-

Quality Since 1871

TURNER

NO. 475
LOW-PRESSURE

TINNER'S
FIRE POT



Smokeless . . . sparkless . . . sootless! Complete with Turner's exclusive "Carburetor Control" for more perfect combustion; positive flame control for exact heat desired. Construction assembly permits quick, easy accessibility and cleaning. Burner coil is extra-heavy seamless steel tubing; pump is heavy blow-proof brass. Fuel capacity — one gallon. Get details, too, on the Turner Plumber's Fire Pot; Turner's complete line of Blow Torches; the new Turner line of LP Fire Pots and Torches. *See your jobber . . .*

THE TURNER BRASS WORKS
SYCAMORE ILLINOIS
SINCE 1871

Announcing . . .

The **FIRST REAL**
Water Saver
for HOME AIR CONDITIONERS

The new Yorktowne Water Saver employs an entirely new principle with many mechanical features including the jet-action water distributor which insures a 100% water-covered condensing coil.



THE
YORKTOWNE WATER SAVER*
HAS 5 BIG ADVANTAGES

1. **Requires not more than 2% Makeup Water** — The unique counterflow design which uses both water and air to condense refrigeration gases cuts the makeup water requirements to a minimum.
2. **Can be Installed in Minimum of Waste Space** — The Yorktowne Water Saver for 5-hp. air conditioner is only 36" long, 25" high, and 22⅛" wide. It is extremely quiet in operation and can be installed anywhere.
3. **Increases Efficiency — Cuts Power Consumption** — The Yorktowne Water Saver reduces the power used up to 30% as compared to standard air-cooled unit.
4. **Minimum of Parts for Service** — All parts are easily accessible. No pulleys, belts, pump packing glands, extra bearings. The entirely new jet-action water system uses large orifice holes to prevent clogging and the air fan is free from moisture as it is located on air inlet side.
5. **Adaptable to "Built-In" Design with New Equipment** — Ideal for use as integral part of complete 3 or 5-hp. air conditioners.

MANUFACTURERS, DISTRIBUTORS, JOBBERS AND DEALERS
Write for Complete Details to

YORKTOWNE MACHINE CO., INC.
538 SOUTH QUEEN ST. · YORK, PA.

***Patents Applied For**



No. 321-A HMV Tandem

Each front grille bar may be adjusted individually. As a result, the angles of deflection or combinations of grille bar adjustment are unlimited. These adjustments may be made when register is installed or at any later time desired. The valves in Independent HMV registers are readily set by a lever control located on the front to direct the air up or down, or the valves may be fully closed. Available in a number of small and large sizes.



We take this opportunity to thank our jobbers, installers and contractors for their patronage over the past years. The good will and support of our many friends and customers have made possible the continuance of our slogan "Always Leading, Always Progressing."

Prompt service is our motto. There's no order too small for our special attention.

THE INDEPENDENT REGISTER CO.
3747 E. 93rd STREET · CLEVELAND, OHIO

equipment developments . . .

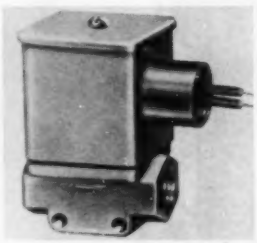
ditioners, room heaters, and furnaces. The instrument can be obtained in both a-c or d-c ratings in any calibration up to 550 F.

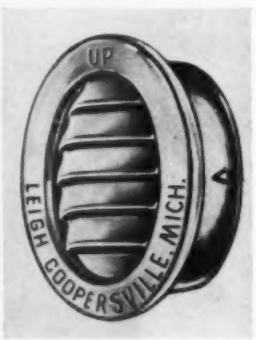
Conditioner for Casement Window Installation

WINDOW TYPE room air conditioner designed for installation in casement windows — Airtemp Div., Chrysler Corp., 1600 Webster Ave., Dayton 1. Available in ½ hp capacity, it fits flush against the window frame and is enclosed entirely within the room. When the conditioner is not in use, the casement window can be closed and locked. The company is also offering a new ½ hp model in its conventional window type air conditioner, and a heating feature will be available in its conventional ¾ and 1 hp window type conditioners through the use of the reverse cycle principle.

Miniature Solenoid Valves

MINIATURE SOLENOID valves for use with all types of gases and fluids — General Controls Co., 801 Allen Ave., Glendale, Calif. Designed to be "no larger than two packs of cigarettes," the valves operate in any position and feature positive shutoff, low current consumption, optional time delay, and adjustable bypass and main flow, the company states. The Model K-28, for use in domestic oil burners, features built in time delay action.





Above: Solenoid Valve

Right: Miniature Ventilator

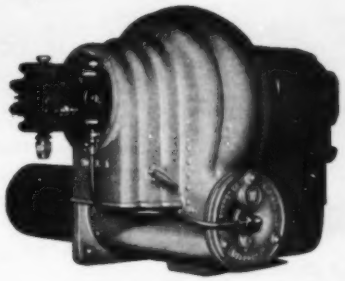
Miniature Ventilator

MINIATURE VENTILATOR (2½ in. in size) designed to aid installers of insulation by getting rid of excess moisture trapped between walls, thus keeping insulation dry — Leigh Building Products Div., Air Control Products, Inc., Coopersville, Mich. It is made of rustproof aluminum. The louvered design conceals the opening and is intended to keep out rain and snow. The louvers are recessed. For installation, a hole of the correct size is drilled and a wood bock is placed over the ventilator and tapped in place with a hammer. Prongs on the ventilator's side are designed to hold it securely in place. The unit is screened for insect protection.

Galvanized Sheet

"SOFTITE" SOFT and tight coated galvanized sheets in 18 to 30 gages — Wheeling Corrugating Co., Wheeling

Wisconsin BURNERS



- A complete line — with Wisconsin Burners you can offer your customers a choice of 5 sizes — from ¾ G.P.H. to 18 G.P.H.
- Every Wisconsin Burner is factory tested under actual firing conditions.
- Wisconsin Burners have a reputation for quality that has made them a leader in the field.
- Available with the famous, efficient Shell Combustion Head.

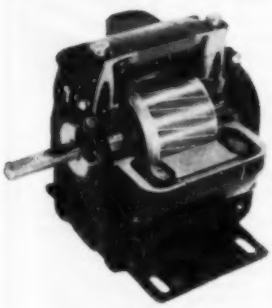
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WISCONSIN OIL BURNER CO.

1134 REGENT STREET • MADISON, WISCONSIN

Redmond MOTORS AND BLOWERS

TO MEET YOUR MOST EXACTING•SPECIFICATIONS

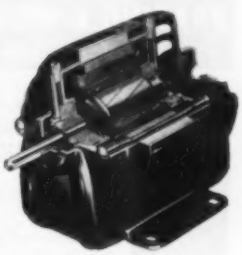


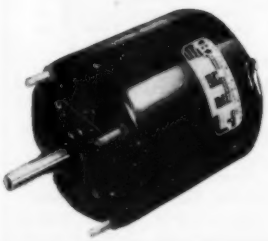
AY & BY MOTORS

With new TRI-FLUX and UNI-CAST features. TRI-FLUX introduces for the first time a third power element to greatly increase starting and running torque. These top quality motors are ideal for larger type fan applications to 22" in diameter and for direct drive furnace blowers. Available in 6-pole 1000 rpm—type AY, and 4-pole 1550 rpm—type BY, with output up to 1/6 h.p.

T MOTORS

Engineered for pumps, churns, grinders and other mechanical and fan applications to 14" in diameter. Die cast constructed cases, cradled in resilient rubber cushions, held firmly by heavy gauge steel stamped base. (Also available without base.) Other features: enclosed forced air cooling, die cast aluminum rotors, large oil reservoirs and self-aligning porous bronze bearings.





W MOTORS

Provide economical power for medium low horsepower ranges (fans up to 16" in diameter). Heavy gauge drawn steel cases, with or without base. Other features include: self-aligning porous bronze bearings, generous oil reservoirs and die cast aluminum rotors.

BLOWERS (Model L-3876)

Redmond provides a wide range of complete motor blower assemblies of single and double outlet construction, for applications requiring generous air delivery with quiet operation. Units are available with deliveries up to 280 cfm.



REDMOND DISTRIBUTORS, INC. 420 LEXINGTON AVE. NEW YORK 17, N.Y.

Steel Bldg., Wheeling, W. Va. It is designed to form easily and freely without distortion strains in the zinc coating which may cause separation from the base metal. The product is made by a patented process.

Motor for Furnace Cleaner

NEW, MORE POWERFUL motor, designed to give a 70 in. water lift at hose end, installed in the "NuVac," "Standard," and "Vacuumaster" furnace cleaner models — Empire Chemical Products Co., 10 Longworth St., Newark 2. The motor takes up the same space as the one it replaces, but has 14 in. more water lift.

The company is providing an extra outlet on the top of all its furnace cleaners so that the operator can plug in his drop light connection without dragging lengths of wire across the furnace room floor. The outlet works independently of the furnace cleaner motor.

Unit Heater

MODEL 50 UF fully automatic unit heater, with 50,000 Btu capacity, for use in smaller shops and stores — Utility Appliance Corp., 4851 S. Alameda St., Los Angeles 58. It is 23 in. high, and was engineered for ceiling suspension. A 24 volt control is provided to eliminate the need for running thermostat lines in conduit. The corrugated heat exchanger is porcelain coated for corrosion resistance. Heat direction is controlled with adjustable louvers. A summer switch provides air circulation for warm weather ventilation and the slow speed motor and resilient hub fan are designed to provide quiet operation. The unit is AGA approved, and is available for use with natural, manufactured, and liquefied petroleum gases.





Above: Window Conditioner
Left: Unit Heater

Window Type Conditioner

NEW 1954 window type room air conditioner featuring extra large coils with more fins per inch, designed to increase cooling and dehumidifying capacity — Refrigeration Div., Curtis Mfg. Co., 1905 Kienlen Ave., St. Louis 20. The hydrolene base is intended to eliminate sweating and the fiber glass insulated bulkhead to reduce noise.



FREE INTRODUCTORY OFFER — Tell us on your letterhead what samples you want, and what metals you soder, . . . we'll include free our new Jr. size scratch brush. Check samples here, and attach to your letterhead.

- ☐ 1 Sodering Salts
- ☐ 2 Sodering Paste
- ☐ 5 Stainless Steel Sodering Flux
- ☐ 6 Sodering Liquid
- ☐ 11 Solid Sal Ammoniac
- ☐ 18 Aluminum Soder





ALLEN SPECIAL STAINLESS STEEL SODERING FLUX

(Item 5)

Here's a remarkable, fast flux that makes the sodering of stainless steel as easy as sodering tin plate. (Also available in a special odorless formula where less strength is required). "ALL-SOL" works with all soders but for best results use Allen stainless steel soder. Pints, gallons.



ALLEN SODERING SALTS

(Item 1)

An all around flux in convenient powder form; just add water 3 to 5 times according to metal to be sodered. Soders all metals but aluminum. Takes a quick bite and makes the soder hold on. Non-acid. Comes packed in metal or glass as preferred. ½ lb., 1 lb., 5 lb. sizes.

ALLEN ALUMINUM SODER

(Item 18)

Allen Alumi-Soder is a complete soder and flux combined. Requires only heat to permanently join aluminum to itself or other metals. Comes in ⅛" square wire form and triangular ¼ lb. and 1 lb. bars. Also in popular trial size pieces, called test pieces. ¾ lb. and 1" bar and wire form.

Also soders cast-iron.

ALUMI—SODER

ALLEN SODERING PASTE

(Item 2)



Standard Formula. Safest soldering paste made—fast working—a convenient corrosion-free, soft form of flux. Adheres to the surface while you soder. Assures secure electrical and mechanical joints. Saves time. Triples strength of the soder. Makes soder self-fluxing. Official National Underwriters Laboratory approved listing. 2, 4, 8, 16 oz.



ALLEN SODERING LIQUID

(Item 6)

Standard Formula. For all-a-round work, for all metals save aluminum and stainless steel.

17,000 pounds to the square inch with no gumming, fumes, or corrosion. Double strength, non-evaporating. Works like Lightning. Adaptable to hand or machine sodering. Excellent for tinning the sodering copper. 2 oz., 4 oz., quarts and gallons.

ALLEN SOLID SAL AMMONIAC



(Item 11)

Speedily cleans and brightens the sodering copper. Outlives fibrous lump many times.

Six sided, solid, convenient. Does not crumble, nor corrode metal work, nor tools on the job.

L. B. ALLEN CO., Inc.
6702 Bryn Mawr Ave., Chicago, 31, Ill.

3 ways to MODERNIZE oil burner installations

install VENTALARM®
Whistling Tank Fill Signal



Here's the way to provide for modern, automatic oil delivery. Guarantees accurate, no-spill fills day or night, whether customer is at home or away.

"Just Fill While the Whistle Blows"

A variety of models for new and old tanks.

install SCULLY® GAUGE
Underwriters' Approved



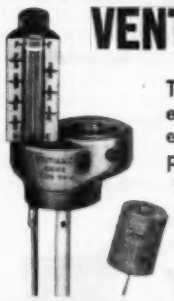
A modern convenience in every way. Big figures readable at first glance. Face adjustable to any angle. Built for accurate, service-free operation. Specify tank depth when ordering.

"BUTTON-LIFT" INSTALLATION

Lifting the button indicator draws cork arm up close to main shaft for easy installation even in partly filled tanks.



or install this combination . . .
VENTALARM® GAUGE
Underwriters' Approved



The famous whistling fill signal and easy reading gauge in one modern unit. Goes on tank as integral part of vent pipe.

Specify tank depth and opening when ordering.

One item to install instead of three . . . with button-lift convenience described above.

Scully Products are manufactured under U.S. and foreign patents or patents pending.

See your regular Supply House.

SCULLY SIGNAL COMPANY

174 Green St., Melrose 76, Mass.

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SAVE TIME SAVE SPACE SAVE WASTE
with DUC-PAC

New . . . . Revolutionary Snap-Together Fittings



They snap together in a matter of seconds.



Here at last is a line of knocked-down duct fittings designed specifically to fill YOUR needs. DUC-PAC'S exclusive internal snap lock eliminates any "folding over" operation ... improves appearance of finished job.

THEY SAVE YOU TIME
You can assemble DUC-PAC galvanized fittings in seconds. Simplified system saves time in laying out a job. Practical design of fitting saves time in installing. They just *snap* together . . . no hammer necessary.

THEY SAVE YOU SPACE
DUC-PAC galvanized fittings are shipped knocked-down, packaged 12 to a carton, require only about 10% of space needed to store old-style fittings. They save space in your truck, too.

THEY SAVE YOU WASTE
Because they're knocked-down and packed in cartons, DUC-PAC galvanized fittings don't become dented or battered in storage or in the truck. Eliminating waste keeps your costs down.

Request free descriptive bulletin showing complete line.

DUC-PAC "THEY ALL GO TOGETHER"

DUC-PAC
DIVISION of SWETT BROS.
78 ISLAND POND RD., SPRINGFIELD • MASS.

equipment developments . . .

Packaged Air Conditioners

COMPLETELY RESTYLED and re-engineered 1954 line of packaged air conditioners for residential, office, store and other uses —United States Air Conditioning Corp., 3300 Como Ave., S.E., Minneapolis 14. Available in 2, 3, 5, 7½ and 10 hp sizes, the equipment is designed to permit a choice of air intake and discharge panels for front, side or rear installation to fit any field requirement. Units are of sectional construction, comprising compressor, blower and plenum, each of which can be ordered separately. The bottom component section (compressor, condenser, coil, filter and control panel) is interchangeable with the company's home air conditioner. For year 'round operation, a heating coil can be mounted in the blower cabinet. New features include airfoil louver discharge grilles, room and outside air intakes with a single filter section to handle both outside and recirculated air, and a central control panel.

EQUIPMENT BRIEFS

FORM F FRACTIONAL horsepower motors in a rerated design — Century Electric Co., 1806 Pine St., St. Louis 3. They are designed to provide more horsepower in smaller frames with the same standards of performance as were previously maintained. They are available in split phase single phase induction, capacitor start single phase induction, and squirrel cage polyphase induction types.

CUSTOM ENGINEERED isolation bases to keep vibration from being transmitted to floors and walls from large fans and compressors — The Barry Corp., 888 Pleasant St., Watertown 72, Mass. Designed to match the vibration characteristics of the installation, the bases are held between steel members that run the full length of the machine.

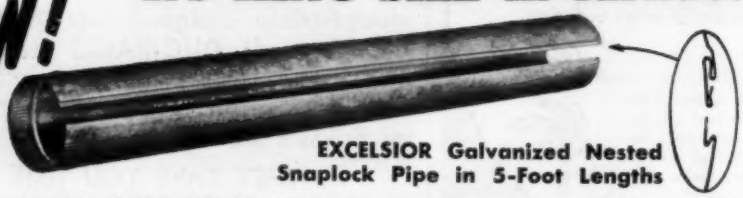
SAW SET containing four saws designed to aid the heating and sheet metal man in cutting the various type holes required for register boxes — Pennsylvania Saw Corp., Box 188, Wellesley Hills 82, Mass. Included are a 16 in. full panel crosscut saw, a 16 in. hacksaw blade, a 16 in. heavy duty blade, and a 16 in. keyhole blade.

"MASTER LOADER" hydraulic lift tail gate with 1000 lb capacity, for ½, ¾ and 1 ton trucks with stake, platform or pickup body styles — Automotive Div., Master Vibrator Co., P. O. Box 657, Dayton 1. It is designed for one man operation. The low pressure hydraulic operating system is initially powered by the truck battery.

LEATHER BACKUP PAD for portable rotary sanders, designed to reduce wobble when polishing stainless steel — Alexander Brothers Belting Co., 406 N. 3rd St., Philadelphia 23. A special method is used to attain balance within the pad so that it will not break down or vary in elasticity throughout its life, the company states.

It's KING SIZE in furnace pipe too!

NOW!



EXCELSIOR Galvanized Nested Snaplock Pipe in 5-Foot Lengths

Available in 4", 5", 6", 7", 8" — 28 Gauge with these advantages —

EASY ASSEMBLY	Slight hand pressure quickly locks it — cannot come apart. One end is crimped and beaded giving a rigid joint without connectors.
EASY INSTALLATION	The perfect pipe for perimeter and high-velocity systems — especially in crawl-space installations.
EASY TO STOCK	Packed 50 feet to a bundle, 100 feet can be stocked in the same amount of space as one 10-foot length of made-up pipe.
FREIGHT SAVINGS	Nested pipe saves dollars in shipping charges over made-up long pipe.

Write for Particulars and New Catalog on Excelsior Complete Line

THE EXCELSIOR STEEL FURNACE COMPANY

ADI STANDARDIZED FURNACE

118 S. CLINTON ST. — **Phone: FRanklin 2-8120** — **CHICAGO 6, ILL.**

EXCELSIOR HEATER & SUPPLY DIV.
The Excelsior Steel Furnace Company
879 Hersey Ave., St. Paul 4, Minn.
Telephone: NEstor 7255

BREX & BIELER DIV.
The Excelsior Steel Furnace Company
229 Marion St., Brooklyn 33, N. Y.
Telephone: GLenmore 2-7881

EXCELSIOR HEATING SUPPLY DIV.
The Excelsior Steel Furnace Company
2 East 3rd. St., Kansas City 5, Mo.
Telephone: Victor 3715

A Consumer Advertising Campaign with an Audience of 75 Million



no wonder your unit heater prospects prefer *REZNOR*

Thirteen times during 1954, LIFE will carry the story of Reznor unit heaters. Before the year is over, 73,050,000 adults will have seen one or more of the issues carrying a Reznor ad. That's 61.1% of all the people in the United States over 10 years of age. Reznor schedules in SMALL HOMES GUIDE, HOME MODERNIZING, NATION'S BUSINESS, NEW EQUIPMENT DIGEST, and INDUSTRIAL EQUIPMENT NEWS add another two million to the audience of this powerful campaign to help you sell Reznor unit heaters.

Reznor is the preferred unit heater among your prospects because Reznor is the *one* name they know. Reznor has consistently outdistanced the field in unit heater promotion. The 1954 program is new evidence of Reznor's determination to maintain the leadership which has made Reznor the world's largest-selling gas unit heater.

For the details on how you can cash in on this great promotional program, write to the **Reznor Manufacturing Company, 53 Union Street, Mercer, Pa.**

THE WORLD'S LARGEST-SELLING GAS UNIT HEATER

REZNOR HEATERS

Extra $ $ Dollars for every installation



Add GLYCOLATOR* Air Sanitation

to new and existing heating and air conditioning installations.

Every installation of this fast selling, low-cost Furnace Model GLYCOLATOR will add more dollars to your total sales along with desirable PLUS dollars of extra profit for your business operation.

The Furnace Model GLYCOLATOR was designed specifically for installation with existing or new warm air heating and air conditioning systems. The compact (10" high) Furnace Model is an electrically operated unit, easily attached to the side of the furnace or air conditioning unit and automatically vaporizes Glycosol. Thermostatically controlled — it protects every room evenly, efficiently and inexpensively — treats homes with furnaces of up to 120,000 B.T.U.

According to hospital tests, Glycosol vapors reduce airborne bacteria and viruses from 80% to 100%. Laboratory experiments have proven conclusively that it is odorless, harmless and absolutely non-toxic.

There is a complete line of heating, air conditioning and portable model GLYCOLATORS available for every application.

DESIRABLE FRANCHISE AREAS AVAILABLE — WRITE TODAY FOR PARTICULARS.

*Registered

Please send me full information on the profitable Glycolator sales plan.

NAME .....

COMPANY .....

ADDRESS .....

CITY ..... STATE .....

Glycolator DIVISION

IRON CITY CHEMICAL COMPANY

Valencia, Pa.

RANDALL'S
Simplified Design



for long life – low cost

The simplified design of these rugged, dependable and precision made bearings is the very reason for their low cost and long life. Randall bearings have no moving parts or complicated mechanism to become defective or wear out. They are easy to install and require the minimum of maintenance since the large "Deep Well" reservoir holds sufficient oil for long periods of operation. Ideal for hard to lubricate applications, Randall's have a unique double-lubricating feature which operates on an oil plus graphite principle and assures proper lubrication at all times.



All this plus the fact that they are self-aligning, self-lubricating, and can be mounted horizontally, vertically or inverted, make Randall bearings ideal for most power transmission applications.

Available for light, normal or heavy duty on shafts from $\frac{1}{2}$" to $3\frac{5}{16}$". For more information write for catalog No. 111, today.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR

Randall

GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.

1000 S. Greenlawn Ave., Lima, Ohio

new literature . . .

Registers and Grilles

CATALOG No. 54-AC (48 pages) describes registers, grilles and diffusers for heating, ventilating and air conditioning applications — Air Control Products, Inc., Coopersville, Mich. One section shows the complete perimeter diffuser line, with installation information, selection charts and engineering data.

Oil Burner Controls

A MERCHANDISING kit on domestic oil burner controls contains 10 promotional pieces designed to help the dealer in his sales program — Appliance Control Dept., General Electric Co., Schenectady 5, N. Y. Included in the kit are technical bulletins, ad reprints, advertising mats, radio spots, window decals, envelope stuffers, stickers, a replacement slide rule, and a pocket size service manual.

Terne Metal Roofing

THE THIRD QUARTER 1953 issue of Terne Topics contains a four page supplement which illustrates a 22 step procedure for installing continuous chimney flashing of terne metal when the chimney straddles the roof of the building — Follansbee Steel Corp., 140 Stanwix St., Pittsburgh 30. Also being offered by the company is a brochure entitled How to Estimate Costs of Material and Labor for Terne Metal Roofs, which contains complete data and work tables for determining roof areas by measurement or calculation. It also includes a method for figuring required rolls of terne metal for a specific roofing job and a formula for calculating price quotations.

Vaneaxial Blowers

BULLETIN A-110 (16 pages) presents information on direct drive vaneaxial blowers, three types of belt drive vaneaxial blowers and a special portable blower for exhausting fumes from tanks — Hartzell Propeller Fan Co., Piqua, O. Included are dimensional drawings and figures and complete air delivery tables.

Gas Heaters

FOLDER describes "Saf-Aire" gas heaters for individual room and small area heating requirements — Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind. Designed for consumer mailings, the circular stresses such features as simplicity and economy of installation and safety of operation. It is illustrated throughout with photographs showing typical installations.

Pressure Brake Dies

CATALOG DM-53 (112 pages) illustrates heavy duty press brake dies and special tooling — Verson Allsteel Press

HICLAND 56-1



Each of OUR organizations is committed to a firm policy of the "*best possible service*" to every Warm Air Dealer, Sheet Metal Contractor and Roofer in the areas we are serving.

THE FAMOUS FURNACE COMPANY, CLEVELAND, OHIO

The Famous Furnace Co. of Akron, Ohio

The Famous Furnace Co. of Lorain, Ohio

The Famous Furnace Co. of Steubenville, Ohio

The Famous Furnace Co. of Mansfield, Ohio

The Famous Furnace Co. of Warren, Ohio

The Famous Furnace & Supply Co. of Wheeling, W. Va.

Every employee will render our Pledged service.

FURNACES . COOLING EQUIPMENT . ROOFING . SHEETS . ACCESSORIES . MACHINERY . TOOLS

be sure of
safe
gas venting



• **best for you**—because Metalbestos is easily and quickly installed. Precision made couplers slip together without forcing . . . are tightly and permanently sealed without using mastic or cement. Adjustable lengths, adjustable elbows and other versatile fittings speed assembly and eliminate wasteful cutting and fitting. Your costs are lower, profits higher, because with Metalbestos you can make more installations per man per day.

• **best for your customers**—because Metalbestos assures safe, trouble-free venting for the lifetime of the house itself. Double-wall design provides an inner "hot stack" for strong draft, minimum condensation . . . and an air-insulated outer pipe to protect adjacent wall surfaces from dangerous overheating. Permanently tight joints and corrosion-resistant aluminum construction are further reasons why Metalbestos can be installed and then forgotten.

* Extensive research and hundreds of tests with both laboratory and field installations have proved that Metalbestos' insulated, double-wall design and all-metal construction assure safer, more efficient venting than other commonly used types of gas vent pipe.

Send for free copy of
VENT INSTALLATION HANDBOOK

Based on the latest gas venting research, this pocket-size booklet contains complete, up-to-date information on venting practices plus many helpful installation tips. Write today to Dept. B.1250A

METALBESTOS DIVISION
WILLIAM WALLACE COMPANY • BELMONT, CALIF.

new literature . . .

Co., 9322 S. Kenwood Ave., Chicago 19. Detailed text and tables explain how to select dies for specific jobs, tonnages required, etc.

Refrigeration Control Replacements

REPLACEMENT reference manual No. 1544 lists over 4636 replacement controls for refrigeration equipment — Ranco Inc., 601 W. 5th Ave., Columbus. The manual lists trade names and refrigeration equipment by year and model, manufacturer's part number, and original and replacement code numbers. It is available only through the company's wholesalers.

Gas Unit Heaters

SERIES 23A gas fired suspended unit heaters are described in a 12 page technical bulletin (No. 23-3) — United States Air Conditioning Corp., 3300 Como Ave., S. E., Minneapolis 14. The line includes propeller fan and blower type heaters, each produced in 14 models, ranging in capacity from 55,000 to 500,000 Btu per hr and burning all types of gas at the rated capacities. Capacity tables and roughing-in dimensions are given as well as structural and operational descriptions.

Self Drilling Expansion Shells

AN EIGHT PAGE bulletin illustrates four types of "Bulldog" self drilling expansion shells — J. D. Polis Mfg. Co., 2900-20 W. 26th St., Chicago 23. The manual gives illustrated instructions explaining how each type of expansion shell is used to drill its own hole in concrete, masonry or stone and then is expanded to form a permanent fastening.

Industrial Fans

POWER EVALUATION chart designed to aid engineers, contractors, plant officials and others in the selection of fans for industrial installations — Chicago Blower Corp., 9867 Pacific Ave., Franklin Park, Ill. Figures are given for 24 hour plant operation, 365 days a year, and for eight hour days on a 300 day basis.

Power Transmission Equipment

AN EIGHT PAGE brochure covers power transmission equipment, including flexible couplings, variable speed pulleys and transmissions, and universal joints — Lovejoy Flexible Coupling Co., 4841 W. Lake St., Chicago 44. Specifications, selection information, and dimensional drawings are included.

Advertising Aid for Small Business

NO. 38 IN THE SERIES of Management Aids for Small Business, published by the Small Business Administration, explains how small business may benefit by the

MAXITROL

scores another first!

a new, modern
GAS APPLIANCE REGULATOR
specifically designed for:
RANGES . . . FLOOR FURNACES . . .
WALL HEATERS . . . CIRCULATORS . . .
INDUSTRIAL EQUIPMENT PILOT
REGULATOR

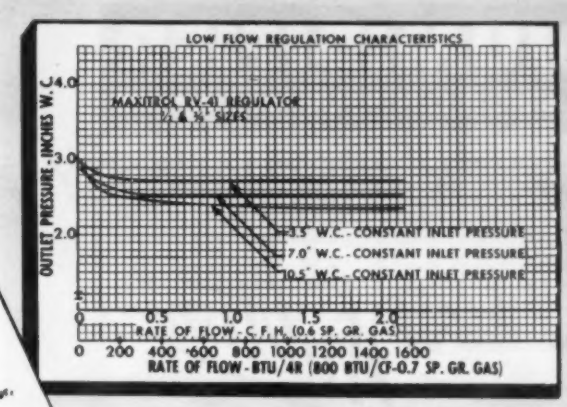
FOR THE FIRST TIME:

MAXITROL Company has developed a modern gas appliance pressure regulator in the new RV-41 which features a non-metallic seating surface. The first of its kind on the market the RV-41 will fast prove the superiority found in all MAXITROL products.

ADVANTAGES:

1. Non-Metallic Seat permits accurate regulation at ¼ cu. ft. per hour, insuring regulation even at minimum pilot flows.
2. Small Breather Hole eliminates need for supplementary vent leak limiting devices.
3. Low Cost. 4. A.G.A. Certified.
5. Spring adjustable outlet pressure.

Tomorrow, as yesterday, you may look to MAXITROL for engineering and product leadership.





SPECIFICATIONS

Model	Pipe Size	Capacity CFH 0.6 SP. GR. Gas	Capacity Btu/HR 0.6 SP. GR. Gas	Capacity Btu/HR 0.7 SP. GR. Gas
RV-41	½ in.	100	50,000	74,000
RV-41	¾ in.	130	65,000	96,000

MAXITROL COMPANY
12200 BEACH ROAD
DETROIT 28, MICHIGAN
Sold on the Pacific Coast by:
PACIFIC SCIENTIFIC CO.
San Francisco, Los Angeles,
Seattle, Portland

Elgo Ventilating Specialties

FAMOUS AUTOMATIC SHUTTER

Unusually sensitive to air currents, causing the louvers to open instantly when the fan is turned on—and snap shut when the fan is turned off. The aluminum louvers are weatherstripped. The best fitting shutter on the market.

Louver blades have special felt silencing pads. Equipped with improved shoulder rivet.

Sizes from 12" to 72" square — also rectangular.



"ELGO" TYPE
AUTOMATIC SHUTTER
Front View (Open)

Elgo Shutters Are Distributed Through Fan and Air Conditioning Equipment Manufacturers



All-Steel Motorized Shutter

●

Used for exhaust ventilation in industrial, commercial and residential buildings. Automatically controlled by fan switch. Positive closing. Stormproof. All-steel construction.

Elgo Shutter & Manufacturing Co.
2738 W. WARREN DETROIT 8, MICH.

Elgo Shutter & Mfg. Co.
2738 W. Warren
Detroit 8, Michigan

Free CATALOG

Please send catalog showing the items checked below:

- Automatic Shutters
- Stationary Shutters
- Hand Operated Shutters
- Ceiling Dampers
- Motorized Ceiling Shutters
- Motorized Shutters

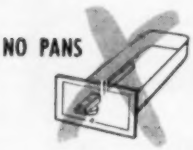
Name .....
Address .....
City ..... State .....

NOW! A truly effective
HUMIDIFIER
USING A CENTRIFUGAL ATOMIZER
for WARM AIR FURNACES!

The new Walton
MODEL WF









Only WALTON provides —
Automatic, Trouble-Free Operation with Positive Moisture Output

Evaporating capacity is better than 3 gallons of water per day. Water vapor is produced by means of a centrifugal mechanical atomizer which eliminates the use of jets, splash plates, evaporation plates or other troublesome parts. This new Walton Model WF can be connected to humidistat control for complete *automatic operation.* Adaptable to all warm air duct systems.

Consistent with our policy of maintaining the highest standards for quality and performance, this model is manufactured of only the finest grades of non-ferrous materials and using exclusive Walton patents.

Only WALTON offers —
Real Humidification for any Type of Heating System
Write today for information on Walton portable room models and literature on the Model WF, the first truly effective humidifier for warm air furnaces.

WALTON LABORATORIES
INCORPORATED
IRVINGTON 11, NEW JERSEY
Chicago Branch Office, 30 No. LaSalle Street

SPECIALISTS IN AUTOMATIC MOISTURE-CONTROL EQUIPMENT, HUMIDIFIERS AND DEHUMIDIFIERS

new literature . . .

careful selection and use of advertising agencies. Properly used, the leaflet points out, an advertising agency can be an important factor in the growth of a small business. Copies may be obtained from field offices of either the SBA or the U.S. Department of Commerce, or by writing to SBA, Washington 25.

Ceiling Exhaust Fan

CIRCULAR describes a ceiling type exhaust fan designed for fast and economical installation in kitchens, bathrooms and rumpus rooms — Phoenix Fan and Blower Mfg. Co., Div. Polaire Cooler Co., 112 S. 8th Ave., Phoenix, Ariz. The housing comes with two detachable supporting brackets adjustable for use with either plaster-lath or dry wall construction. Motor, grille and fan blade are in one assembly.

Multiple Hole Punching System

CATALOG MH illustrates and describes a multiple hole punching system with retainer plates for punch assemblies which was designed to provide a fast and economical method for punching unlimited hole patterns in sheet metal parts — Wales-Strippit Corp., 345 Payne Ave., North Tonawanda, N. Y. One advantage claimed for the system is the quick, easy manner in which an entire assembly can be made outside the stamping press or press brake.

Furnace Filter Material

CIRCULAR gives data on hammock style filter material available in dispensing cartons or paper-wrapped rolls — The Lennox Furnace Co., 200 S. 12th Ave., Marshalltown, Ia. In addition to being offered in dispensers and rolls, the material is available in various precut sizes which are shipped in cartons measuring $2\frac{1}{2} \times 5 \times 9$.

Combustion, Other Instruments

BULLETIN presents a line of specialized instruments and gages — F. W. Dwyer Mfg. Co., 317 S. Western Ave., Chicago 12. Included are instruments for measurement of combustion, draft, pressure, flow, vacuum, CO_2, smoke, velocity, static pressure, pressure differential, temperature and others. Each type is illustrated and described.

Metal Building Products

INFORMATION on metal awnings and canopies and gable and roof ventilators is presented in Catalog No. 54-L — Leigh Building Products Div., Air Control Products, Inc., Coopersville, Mich. Complete data on sizes, weights, and installation requirements is included.

HOW YOU CAN

Save Hours

FORMING METAL ANGLES

METAL shrinking or stretching that formerly took hours is now done in minutes with the C-B Manual Metal Shrinker or Stretcher. They handle sheet metals up to 16-gauge. No adjustment. Forms to radius as small as 3". Use these C-B tools on bench, stand or in a vise. Ideal for making machine guards. Compact and portable. Reversible, hardened steel jaws for double service life. *Write for free illustrated bulletin.*





Now only $39.50 each

SHRINKERS & STRETCHERS

Write for folders showing "in use" illustrations of

Metal Cutters — Rivet Cutters
Lightening Hole Punches
Crimpers — Ratchet Wrenches
Flexible Files — Notchers
Appton Super Hammers
and many other
"industry-proved"
Sheet metal tools

•

M-M-A INC.
Lancaster, Pa.

•

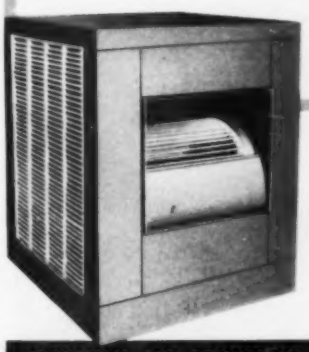
(Jobber inquiries invited)

easiest installation!
lowest operating cost!
highest cooling efficiency!

CHILL-AIR

EVAPORATIVE COOLERS

for Home— Business— Industry



INDUSTRIAL AND COMMERCIAL COOLERS

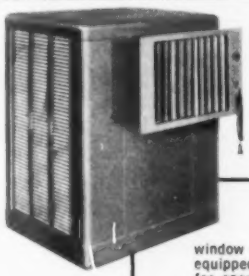
Model No.	CFM	HP	Cu. Ft. of Space to be cooled
45P	4500	½	3,000- 4,000
70P	6800	¾	3,500- 6,000
100P	9600	1	7,000-15,000
150P	15000	2	15,000-30,000

Above motors 110-220 v. single phase (three-phase motors available on order)

For more than 20 years the complete Chill-Air line of Evaporative Coolers for home, commercial and industrial use have proved their merit in design, construction and performance. Easier installation, servicing and maintenance, plus low operating expense and high cooling efficiency contribute to Chill-Air's ever-growing popularity with contractors and building owners.

Chill-Air industrial and commercial coolers are designed for easy installation on the roof or sides of buildings. Available in standard models for reducing temperatures 12-18° in spaces from 3,000 to 30,000 cf. Larger models built to exact specifications.

Uniform, non-clog water distribution troughs and easily removable evaporative pads assure maximum evaporative surface. The 110-220 v. motor can be oiled and serviced by simply removing pads. Recirculating pump systems eliminate water waste.



CHILL-AIR MORE-VIEW

window coolers for home and offices are equipped with window adaptors and come ready for operation. No wiring or holes to cut. Just set in window, connect to waterline and plug into nearest outlet.

MORE-VIEW HOME AND OFFICE COOLERS

Model No.	CFM	HP	Speeds	Size H	Size W	Size D
32WP	3000	1/6	2	39	31	24
40WP	4000	1/3	1	39	33	28
42WP	4000	1/3	2	39	33	28

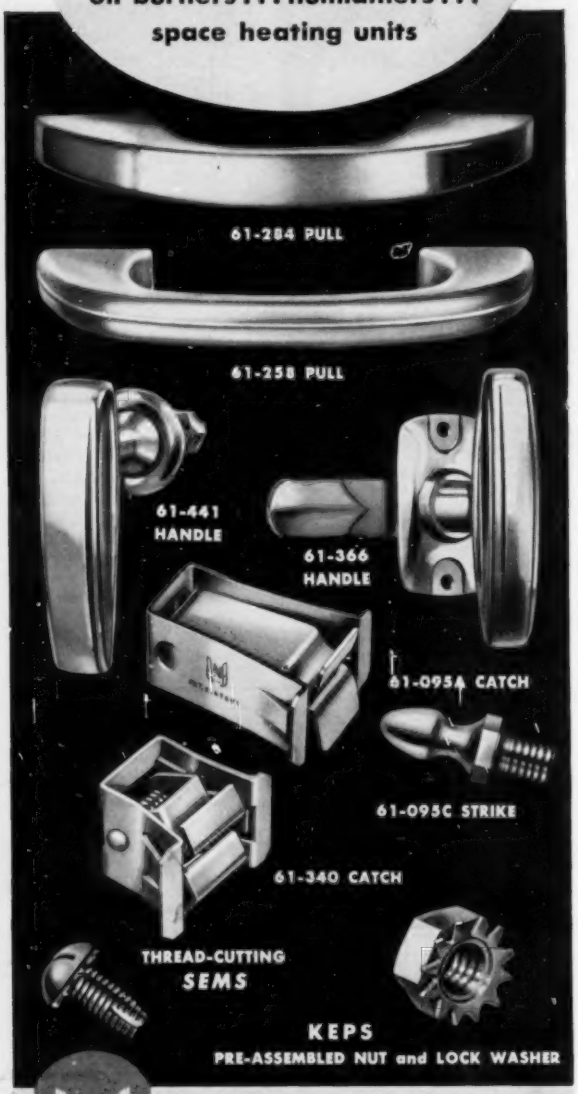
Above motors 110 v. single phase for plug-in to electric outlet

FREE Engineering Service — Write for descriptive literature

NATIONAL ENGINEERING & MFG. CO.
SEDALIA, MISSOURI

Top Quality
NATIONAL LOCK
Hardware
makes a good product better

Ask About It For Use On
air conditioning equipment . . .
stokers . . . gas heating units . . .
oil burners . . . humidifiers . . .
space heating units



write for complete information
NATIONAL LOCK COMPANY
ROCKFORD · ILLINOIS

we hear that . . .



EMPLOYEES of the Famous Furnace Co. enjoy their annual Christmas party

THE FAMOUS FURNACE CO. held its 16th annual Christmas party on December 5 at the Mid-Day Club, Cleveland. The company's employees have raised a fund for a full scholarship at Case Institute of Technology, to be known as the Hyman Blaushild Scholarship Fund, to aid outstanding young men in the pursuit of an education which will qualify them for leadership in the field of heating and air conditioning. Dean Elmer Hutchisson of Case Institute was guest speaker and accepted the fund which will be perpetuated each year.

THE NATIONAL RADIATOR CO. has purchased the principal assets of the Viking Air Conditioning Corp. Marion I. Levy, president of Viking, has been elected a vice president of the National Radiator Co. and has been named general manager of Viking, which will operate as the Viking Air Conditioning Division of the National Radiator Co.

HAROLD W. SWEATT, president of Minneapolis-Honeywell Regulator Co., was recently elected chairman of the board, succeeding Mark C. Honeywell, who was named honorary chairman. Paul B. Wishart, vice president and general manager of the company, was elected to succeed Mr. Sweatt as president. Tom McDonald, vice president in charge of sales, was also elected a director.

John E. Haines, vice president, was recently appointed to the Building Research Advisory Board, an organization created to advance technical knowledge in all phases of the building industry. Members include executives of companies that are directly connected with the building industry, government officials and members of engineering school faculties.

Warren G. Jennings, resident vice president of the company's Boston branch, has retired under the firm's executive retirement plan established in 1943. Mr. Jennings, who has been with the company for 37 years, went to Boston in 1936. Before that he opened and



Oh! WHERE... *is my wandering ad tonight?*

THERE are two ways to buy advertising space. One is the guesswork-opinion method. The caption above is the mournful song of an advertiser who is still selecting media the way it was done before World War I, when there were no standards for the circulations of published media and when there was no accepted and approved method of auditing circulations. In those days, advertisers O.K.'d their proofs and sent out their advertising with a prayer that some of their sales messages would find their way to market.

The other way to buy space is the factual, know-what-you-get-for-your-money method. Today advertisers can start their investments on a basis of facts by selecting media with the help of the information in the reports issued by the AUDIT BUREAU OF CIRCULATIONS. This cooperative and nonprofit association of 3300 advertisers, advertising agencies and publishers, organized in 1914, has established standards that make it possible to evaluate the circulations of published media. The A.B.C. maintains a large staff of experienced and specially trained circulation auditors who make annual audits of the circulations of publisher members. A.B.C. reports give the facts thus obtained.

Here are some of the audited facts about business papers that A.B.C. reports tell the advertiser:

—how much paid circulation;
—how much unpaid;
—an occupational or business breakdown of subscribers;
—where they are located;
—how much subscribers pay;
—whether or not premiums are used;
—how many subscribers are in arrears;
—what percentage of subscriptions are renewed.

Those who buy advertising on the basis of this factual information, as given in A.B.C. reports, do not have to speculate about the distribution of their sales messages. They KNOW where and to whom their advertising goes. That is why this business paper is a member of the AUDIT BUREAU OF CIRCULATIONS. Ask for a copy of our A.B.C. report and then study it.

AMERICAN ARTISAN

A.B.C. REPORTS—FACTS AS THE BASIC MEASURE OF ADVERTISING VALUE

managed branches in Milwaukee and Chicago. He was named a vice president in 1927.



SALESMEN from 11 district offices of the Heil Co. gathered in Milwaukee to hear about the company's new merchandising program

DISTRICT REPRESENTATIVES of the Heil Co. recently attended a four day conference in Milwaukee to learn about the heating division's merchandising program for 1954. The sessions were conducted by George E. Hochstein, sales manager of the heating division, and Wm. A. Matheson, Jr., sales promotion manager.

U. S. AIR CONDITIONING Corp. has doubled its manufacturing space by leasing a group of industrial and office buildings on the tract adjoining its main office and plant. A 50 per cent increase in production made the additional space necessary, according to D. E. Feinberg, vice president and general manager. The company plans to place increased emphasis on the manufacture of self-contained central station air conditioning equipment, packaged air conditioning units, home air conditioners and window type air conditioners.

CHRISTMAS PROMOTION, including gift certificates for room air conditioners, initiated the 1954 advertising campaign of the Airtemp Div., Chrysler Corp. The campaign also includes cooperative newspaper advertising, direct mail advertising and point of sale merchandising.

GENERAL CONTROLS Co. recently held a two-day open house to celebrate the opening of its new appliance controls plant in Burbank, Calif. A feature of the opening day ceremony was a 240 ft panoramic exhibit showing the numerous functions performed by automatic controls.

THE CLEVELAND ELECTRIC Illuminating Co. recently completed installation of the first reverse cycle heat pump for residential use in northern Ohio. The pump will be operated under laboratory control conditions in a ranch home owned by one of the company's employees. Special meters will record the pump's operating and performance characteristics over a period of two years. The pump is a General Electric Corp. 3 hp model, with six kilowatts of auxiliary resistance type electric heating

"OLD ROCKING CHAIR 'S GOT ME" **Beckett Commodore Oil Burners.**

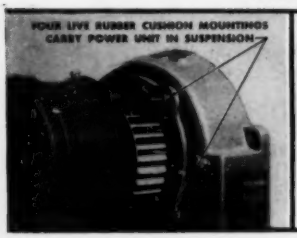


Today . . .
ROCKING CHAIR COMFORT has become the by-word of service men who know Beckett COMMODORE oil burners. Engineering foresight eliminates inconvenience and tedious adjustments. Note the time saving features below.



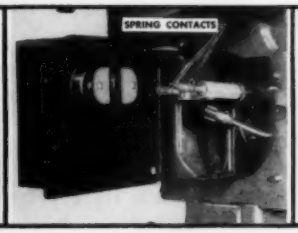
Different!
22 U. S. and Canadian Patents.

ALL VITAL PARTS ACCESSIBLE FROM BACK OF BURNER



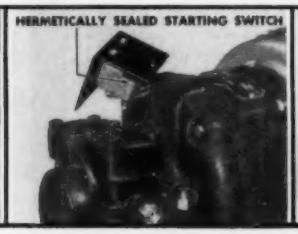
The Power-Unit is removable as a single unit from the rear.

NOTE: All moving parts suspended in rubber prevent metal to metal contact and sound transmission.



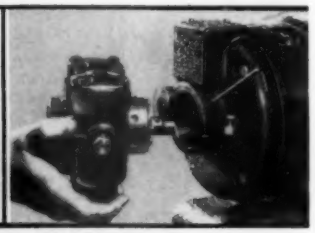
Convenient access to nozzle-electrode assembly.

NOTE: No ignition cable. Spring contacts automatically make connection when transformer is closed.



Sealed Starting Switch at top of motor.

NOTE: Remove only one screw for access to motor switch . . . not necessary to remove motor or Fuel-Unit.



Fuel-Unit easily removable from rear of burner by loosening 2 set screws.

NOTE: All parts are conveniently located and cannot be assembled in misalignment.

R. W. BECKETT CORPORATION, ELYRIA, OHIO



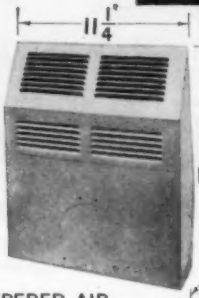
HIGHBOY Model 85

HIGHBOY furnace in 85,000 BTU capacity. Complete with burner, filter, blower motor and controls . . . ready to install.



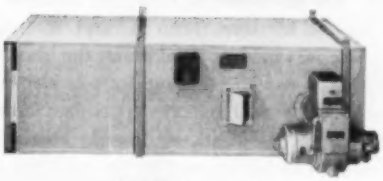
LOWBOY Models 85, 115, 150, 200

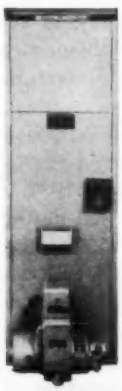
Designed for homes with up to 200,000 BTU output requirement. A complete installation, including burner, filter blower, motor and controls . . . ready to install.



TEMPERED AIR DIFFUSER...Eliminates all cutting and framing! Register box fits flush with the wall surface. Special design minimizes use of cold air returns by circulating air within rooms. 2 11/16"

GENERAL AUTOMATIC PROFIT LEADERS FOR 1954





HORIZONTAL OR SUSPENDED UNIT

85,000 BTU capacity, designed to meet the demands of small homes. Attic or underfloor installation. Complete with dependable General Automatic Model E burner, approved by Underwriters Laboratories.

COUNTERFLOW Model 85

For perimeter or radial warm air heating; for slab or crawl space installation. Ideal all-in-one installation. Complete with burner, filter, motor and controls, all ready to install. 85,000 BTU capacity.

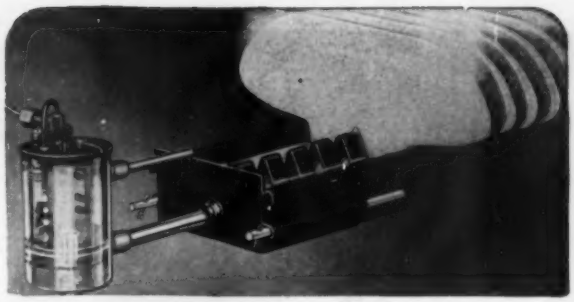
ACT NOW FOR BIGGER PROFITS! WRITE . . . WIRE OR PHONE!
For the best in WARM AIR heat . . . combine a General Automatic warm air unit with Floorlevel warm air BASEBOARD HEATING. Send for Spec. 67.



GENERAL Automatic®

GENERAL AUTOMATIC PRODUCTS CORP.
2300 Sinclair Lane • Baltimore 13, Md.

Representatives in Principal Cities.



MONMOUTH HUMIDIFIERS

The Extra Sale that will bring YOU Better Profits in 1954

You will be doing a favor to every furnace user you serve — every new furnace buyer — and to yourself — if you resolve now to push the sale of Monmouth Humidifiers in 1954.

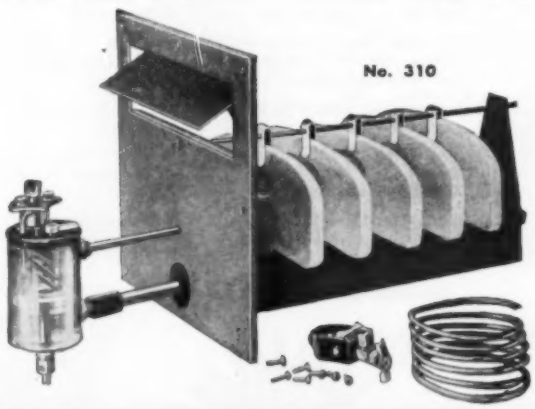
Simply point out to home owners that dry air is harmful to health — that it dries out furniture, plaster and woodwork — causes costly repairs — and it isn't difficult to make a Monmouth sale. Nor is it hard to install — takes little time — yet pays you big profits.

Monmouth Humidifiers come to you packaged — in 16 sizes that take care of furnaces up to 420,000 B.T.U. — in two styles with time-tested Flotrol or Microfeed control — and in a special Humidity Control Unit for use with radiation heat. All employ the exclusive Monite plate for fast vapor diffusion.

Resolve now to let Monmouth help you make more money in 1954. Write today for descriptive bulletin and size, price and discount sheet.

THE CLEVELAND HUMIDIFIER CO.

7802 Wade Park Avenue **Cleveland 3, Ohio**



MONMOUTH HUMIDIFIERS

Picture of a Contractor Saving TIME and LABOR!



You can save valuable time and labor and increase your profits by installing Patco Warm Air Baseboard just like many other contractors are doing throughout the country. It's easier, cheaper, faster to install because:

1. you simply nail the baseboard to studs, then snap on the diffuser face.
2. there's no fabricating time. You just count the outlets and order the proper number of top and side take offs and the correct amount of pipe. You don't have to make dampers or transformers and cut elbows or ducts.
3. a smaller extended plenum is used with 4" or 5" runs to each room. There are no tapered ducts and many different size fittings to fuss with.
4. The one Patco connector that is required — available in two sizes and two styles — is well designed, easy to put together.
5. inexpensive industrial downspouting in 10' lengths can be used for 4" and 5" diameter pipe.

Add up all of these advantages and you'll see why contractors tell us it's so profitable for them to install Patco Warm Air Baseboard.

We'd like to tell you more about this high quality, efficient system that offers your customers many advantages, too.

Write Dept. A for full details.

PATCO
AIR-BASEBOARD
THE WALL RADIATES HEAT

PATENT PENDING

PATCO MFG. CO., 231 N. BREAD STREET, PHILADELPHIA 6, PA.

we hear that . . .

available for periods of unusually cold weather. Employing the principle of air-to-air transfer, it will cool, filter, and dehumidify the air inside the house in hot weather; and heat, filter, and circulate the air during cold weather.



THE NEW PLANT of Skuttle Mfg. Co. offers increased floor space and provides the advantages of one-level manufacturing

SKUTTLE MFG. CO. recently moved into its new plant at Milford, Mich., a suburb of Detroit.

THE STELWAGON Mfg. Co., distributor of warm air heating equipment, recently celebrated its 100th anniversary. The firm was founded in 1853 by Joseph Stelwagon, who a few years later took his three sons into business with him. On his death in 1885, the business was taken over by two of his sons, John W. and William H. In 1914, the firm was incorporated under the laws of Pennsylvania. In 1915, Joseph Stelwagon 3rd was elected president, and Henry W. Stelwagon, vice president and treasurer. In 1940, upon the death of Joseph, Henry Stelwagon purchased all of his interest in the company and was elected president. The present officers of the company, in addition to Mr. Stelwagon, are Walter S. McCallion, vice president; John E. Phillips, treasurer; and Robert K. Studenmund, secretary.

The company has undergone continuous expansion through the years. In 1918, a new Philadelphia branch warehouse was built, and in 1922, another. In 1934, a larger warehouse was built in Philadelphia, and during 1935, another modern building was purchased. To service the trade in southern New Jersey, a warehouse was opened at Camden in 1936. In 1951 additional buildings were opened for business in West Reading. In 1948, a branch warehouse was acquired in Wilmington. Space there became inadequate, necessitating the purchase of new land and the building of a new warehouse in 1953.

A MERCHANDISING CAMPAIGN directed to manufacturers of oil burning heating equipment has been initiated by the A-P Controls Corp. The campaign is designed to help space heater manufacturers to merchandise automatic heating accessories to their dealers and wholesalers. A total of approximately 30,000 dealers is expected to be contacted by manufacturers in the merchandising program. Included in the package to be sent are a

Manufacturers' Agents

Are you interested in securing additional lines?

We are occasionally asked by our manufacturer advertisers to suggest the names of manufacturers' agents in various sections of the country whom they can contact in regard to representation of their warm air heating, residential air conditioning and sheet metal products.

If you would like your name listed on our records for inquiries we may receive on your territory, we invite you to write us. There is no charge in connection with this service.

AMERICAN ARTISAN

6 N. Michigan Ave. Chicago 2, Ill.

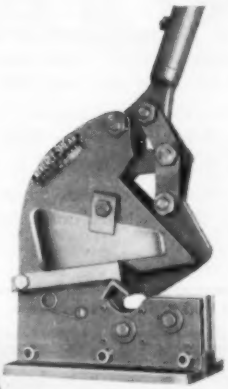
Beverly Shears MEAN BETTER WORK



B-3 with Ball Bearing Hold Down

THROATLESS SHEAR

Make straight or intricate cuts in the lightest metals without distortion, yet handle heavier gauges with ease on a BEVERLY — the all-round Throatless Shear. Made in 4 models to handle 18 gauge 3/16". Equipped with High Carbon, High Chrome Blades.



CABLE CUTTER

Cuts wire rope up to 11/16" dia. quickly and cleanly at one stroke. Also handles heavy electrical cable, armored cable, steel reinforced rubber hose, etc., with ease. Snap-Action Hold Down assures faster operation. High Carbon, High Chrome blades assure long cutting life.



INSIDE SLOTTER

8" reach, Inside Slotter, designed to make inside cutting and slotting faster and easier. Capacity up to and including 16 ga. mild. Cuts slot 2½" long x ⅛" wide with one stroke. Unique arrangement of 5 H.C.H.C. blades assures fast, clean, accurate cutting.



SLITTING SHEAR

All steel welded construction, plus extra built-in strength keeps the "SS-3" Slitting Shear cutting clean indefinitely. No springing of blades, no distortion after use. Slitting capacity 3/16" mild steel; trimming capacity 5/16"; bar capacity ¼" x 2". Equipped with High Carbon, High Chrome Blades. Made in 3 sizes.

See your Dealer or Write direct for illustrated catalog sheets on Beverly equipment.

THE BEVERLY SHEAR MFG. CO.

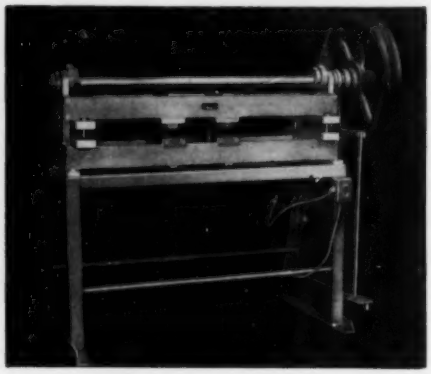
3020 W. 111th Street Chicago 43, Illinois

FALLSINGTON

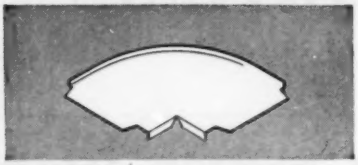
SAVE DOLLARS

WITH A

FALLSINGTON HUSKY PRESS



Do it the easy way with a Fallsington Husky.



The Husky Press is of a straight-forward all welded design with no fancy fixtures or dead weight in castings.

The Husky Press will stamp accurate blanks of any shape representing 65 lineal inches in sheet metal 24 gauge or less at a high rate of speed.

For heavier work investigate our **New** Fallsington Multi Die Press — pictured below.

The Multi Die Press is ideal for short runs with Dies made of Kirksite or any other soft material dies.

Write for demonstration, our sales Representative will call with demonstrator.



FALLSINGTON MANUFACTURING CO.
FALLSINGTON, PA.

Manufacturers
SHEET METAL MACHINERY & TOOLS

we hear that . . .

binder containing sales bulletins, a sales promotion book and price and installation sheet; color displays for both counter and window; cuts and mats for newspaper, catalog or direct mail campaigns; and folders, stuffers, etc.



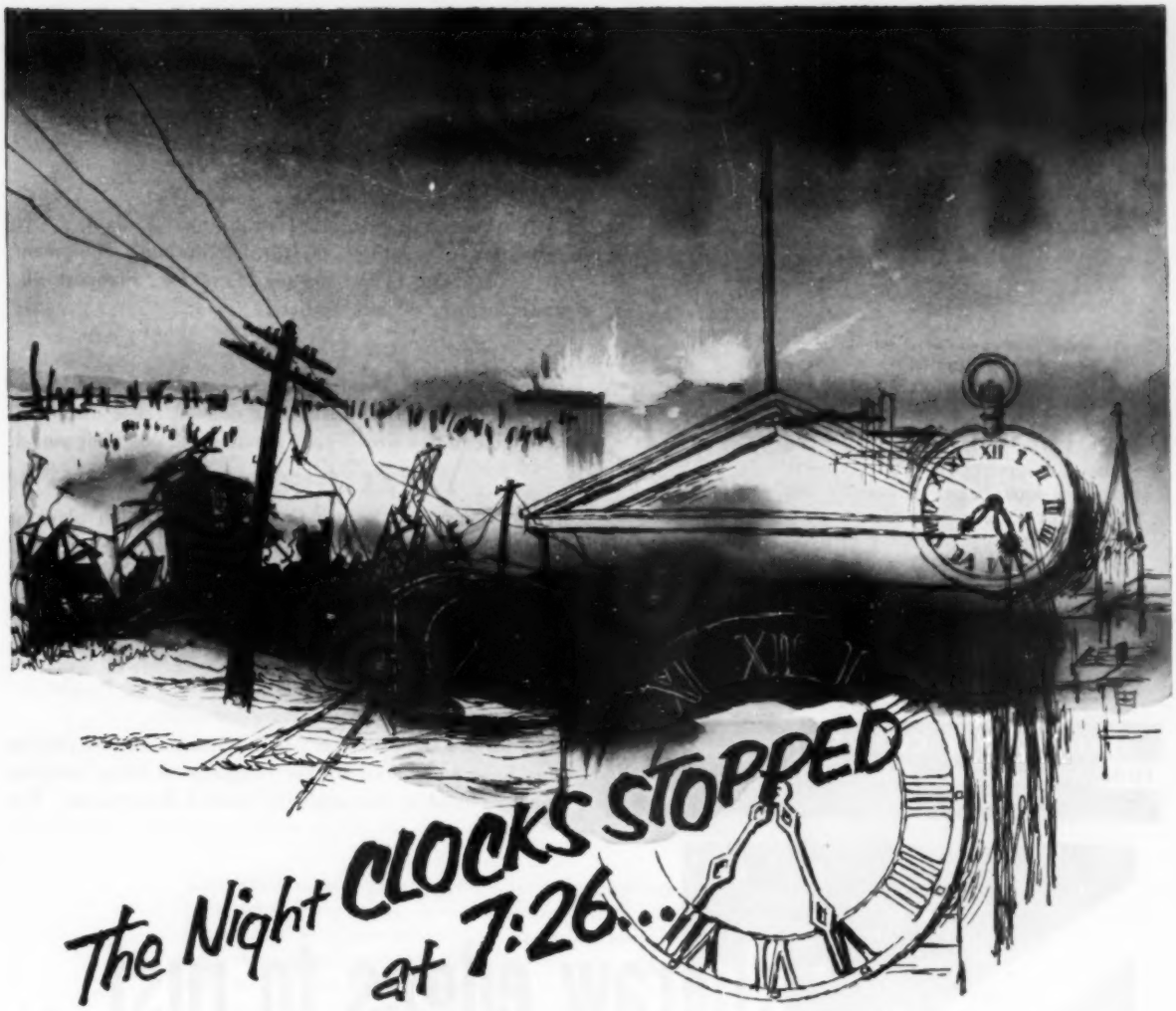
ONE OF THE features of the Robertson Heating & Supply Co.'s new plant is a 540 ft conveyor drag line which moves loading carts through sections of the warehouse to the final shipping area

THE ROBERTSON HEATING & Supply Co. celebrated the opening of its new plant at 500 W. Main St., Alliance, O., with an open house attended by more than 2000 guests, including manufacturers, their representatives, and the general public.

The company was established in 1934 by John Robertson, then 22 years old. His first warehouse, consisting of an assortment of lumber sheds, a barn, and some double garages, was staffed by two people — himself and one employee. The company now has 139 employees, including 33 salesmen, and five warehouses which serve 45 counties in Ohio, western Pennsylvania and W. Va.

U. S. MACHINE DIV., Stewart-Warner Corp. recently sponsored a series of regional classes on heat loss-gain calculations. Three hundred "Winkler" dealers attended 15 two-day schools conducted by Phil C. Kosch, who was assisted by district sales managers. Advance registrations for the two week courses at Winkler Institute, Lebanon, Ind., indicate that the institute will break all attendance records during 1954.

REMINGTON CORP. plans an extensive advertising and sales promotion program for 1954 aimed at securing new dealers for early season selling. The trade program will be accompanied by consumer newspaper ads, posters, and TV and radio spots. A program of dealer training, including color films, brochures and a monthly newsletter, is also being made available. Another service being offered to dealers is the handling of direct mail campaigns. Under this arrangement, the company will



Some 9,500 people were in South Amboy, N. J., that drizzly evening in 1950. At the waterfront, longshoremen were transferring the last of 12 freight cars of ammunition to lighters that would carry it to a waiting vessel in Raritan Bay.

But the City Hall clock never got to 7:27—and the freighter's deadly cargo never got loaded. Explosions shattered windows over a radius of 12 miles; and hundreds of people looked at their arms and legs and saw that flying daggers of glass had stabbed them.

At dawn, 312 of the injured had been counted.

★ ★ ★

Such disasters have happened many times before in America. They could happen again. And *if* they do—and *when* they do—there must be blood plasma on hand to take care of the injured. For blood saves lives!

But blood cannot be mined or manufactured. It must come from the veins of healthy men and women. Men and women who feel concern for a suffering neighbor. So give blood—now!

Whether your blood goes for Civil Defense needs, to a combat area, or to a local hospital—this priceless, painless gift will some day save an American life!

Give Blood Now

CALL YOUR RED CROSS TODAY!

National Blood Program

Business Executives!

✓Check These Questions!

If you can answer "yes" to most of them, you—and your company—are doing a needed job for the National Blood Program.

- ☐ Have you given your employees time off to make blood donations?
- ☐ Do you have a Blood Donor Honor Roll in your company?
- ☐ Have you set up a list of volunteers so that efficient plans can be made for scheduling donors?
- ☐ Have you arranged to have a Bloodmobile make regular visits?
- ☐ Has your management endorsed the local Blood Donor Program?
- ☐ Have you informed employees of your company's plan of co-operation?
- ☐ Was this information given through Plant Bulletin or House Magazine?
- ☐ Has your company given any recognition to donors?
- ☐ Have you conducted a Donor Pledge Campaign in your company?

Remember, as long as a *single* pint of blood may mean the difference between life and death for *any* American . . . the need for blood is *urgent!*

4 Real Reasons why 370 SPECIAL RED OXIDE PAINT

Can Cut Your Sheet Metal Painting Costs



1. More coverage per gallon
2. Easy, fast application
3. One coat covers
4. Faster setting-up time

Yes, 370 Special can save you money. Users report it covers more than five squares per gallon . . . sets up in 4 or 5 hours. It pleases your customers because it *really protects* against corrosion. Also available in green, blue, gray, brown and aluminum. ORDER 370 SPECIAL NOW FROM YOUR DISTRIBUTOR, or write for complete details and prices.

THOMPSON & COMPANY
1085 Allegheny Ave., Oakmont, Pa.
Established 1847

we hear that . . .

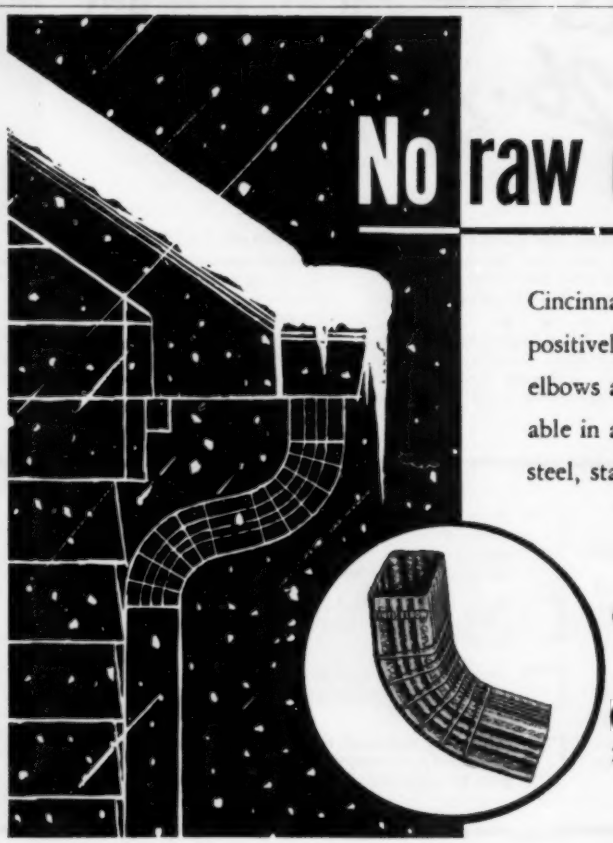
imprint and mail literature for the dealer from the factory at nominal cost. Other material being offered includes literature, envelope stuffers and point of sale display material such as posters and banners.

THE MANUFACTURING assets of Eureka Williams Corp., producer of heating and air conditioning equipment, have been sold to the Henney Motor Co., Freeport, Ill., manufacturer of auto bodies.

MID-CONTINENT Metal Products Co. is offering a gas burner display piece to heating dealers. The display is available in two sizes — one window and one floor model.

THE GENERAL ELECTRIC Co. plans to build a plant at Holland, Mich., for its hermetic motor department. Manufacturing is expected to start early in 1955. When the plant is in full operation, it will employ more than 400 people. Ab Martin, manager of the department, explained that the new plant is necessary to meet the growing demand for hermetic motors used by the refrigeration and air conditioning industries.

A service and exchange plan for franchised distributors has been announced by the company to cover controls manufactured by the appliance control department. The



No raw edges to rust...

Cincinnati Elbows, hot dipped in zinc *after* formation, positively guarantee a rust-proof longer life. These elbows are tapered to fit any size standard pipe. Available in any size, angle and metal, including galvanized steel, stainless steel, copper and aluminum.

Give your customers the best elbow available.

ASK YOUR JOBBER.

Cincinnati Elbows fit better because they're made better!

CINCINNATI ELBOW CO.
2021 EASTERN AVE., CINCINNATI 2, OHIO

"... opportunity is freely given..."



PAUL M. HAHN
President, The American Tobacco Co.

"Our nation has grown great largely because opportunity is freely given. Only very few people actually make their own 'breaks.' Today, millions of Americans are providing for their personal financial security and at the same time helping in the building of our national defenses. The opportunity to do so is given by business management which affords employees the means of practicing systematic thrift through the Payroll Savings Plan for the purchase of U. S. Defense Bonds."

Nearly seven million employees of industry are "providing for their personal security and at the same time helping in the building of our national defenses."

- they are the men and women who availed themselves of the opportunity referred to by Mr. Hahn—the opportunity to enroll in the Payroll Savings Plan for the systematic purchase of U.S. Defense Bonds.
- they represent a high percentage of their companies' employees—in plant after plant, the averages are climbing to 60%, 70%, 80%—even higher.
- their investment in Defense Bonds—and America—add up to $140 million per month.
- they constitute a large block of the men and women who on December 31, 1951, held Series E Bonds amounting to $34,727,000,000—$4.8 billions more than the cash value of Series E's outstanding in August, 1945.

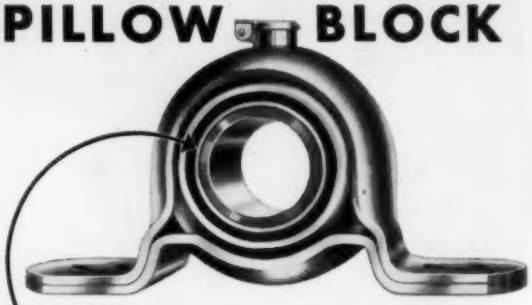
Not far from you is a State Director of the Savings Bond Division. He will be glad to tell you how easy it is to give your employees a Payroll Savings Plan. Or, if you already offer the Plan to your people, he will show you how to conduct a simple person-to-person canvass of your plant—a canvass intended to do only one thing—to put a Payroll Savings Application Blank in the hands of every man and woman on your payroll. Your employees will do the rest.

Phone or write to Savings Bond Division, U.S. Treasury Department, Suite 700, Washington Building, Washington, D. C.

The U. S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

AMERICAN ARTISAN

TRIANGLE
PILLOW BLOCK



SHOCK-ABSORBING BUILT-IN CUSHIONS

- For fans, blowers and other devices requiring self lubrication—perfect alignment—silent operation.
- Low prices include built-in, non-hardening cushions. It's all in the ball—no extra parts to buy or handle!

Special Mountings Designed To Meet Specific Needs



Triangle Bridge-Tree Type Pillow Block

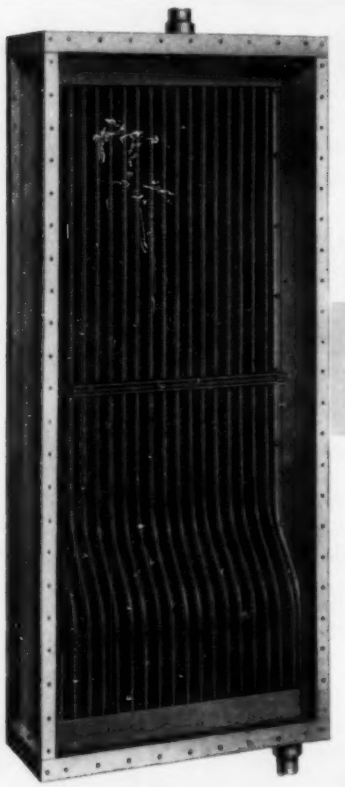
TRIANGLE MANUFACTURING COMPANY
392 DIVISION ST. OSHKOSH, WIS.

we hear that . . .

plan is intended to give distributors lower overhead, faster turnover, and better customer service. For dealers, it is designed to increase customer satisfaction by giving immediate service and eliminating call-backs. By keeping a set of controls in his service truck, the dealer can install a new control and return the inoperative unit to his distributor. Controls accumulated by the distributor are shipped to the GE plant at Morrison, Ill. Reconditioned controls are shipped back to him freight prepaid. For this exchange service the dealer pays rebuilt prices established by the distributor or nothing at all, depending on the length of time the replaced control has been in service.

TWO YORK CORP. engineers, Neil E. Hopkins and J. J. Seelaus, received the Wolverine Award of the American Society of Refrigerating Engineers for the best paper published in the society's journal, Refrigerating Engineering, in 1953. Title of the paper was Temperature Change as Affected by Different Pulldown Methods.

THE TYWEL MFG. CORP., with Alexander M. Lewyt as president, was recently organized to manufacture air conditioning units for other companies under their brand names. The new firm's factory, located in Brooklyn,



EFFICIENT *Extended-Surface* for HEAT EXCHANGERS

HEATING COOLING PROCESS
AIR CONDITIONING

ASK THE AEROFIN MAN

Your Aerofin man's recommendation means high efficiency, long service life, low maintenance costs.

Aerofin's unequalled laboratory and manufacturing facilities—unequalled knowledge of heat-exchange practice—are devoted exclusively to the design and manufacture of highest quality extended heat surface.

AEROFIN CORPORATION

Aerofin is sold only by manufacturers of fan-system apparatus. List on request.

410 South Geddes St., Syracuse 1, N. Y.

You can sell

LOW COST COOLING!



ALTON

"airwasher type" EVAPORATIVE COOLER

Maximum Sales Possibilities — Offer your customers the finest in evaporative cooling. Ideal for retail stores, markets, taverns, churches, factories, theaters, etc. Contains features not available on ordinary evaporative coolers, such as the "Aquasprae", which sprays and recirculates the water; and two sets of filters that eliminate moisture "pull-through."

Best Buy in Cooling Units — Preferred by merchants everywhere, this air-washer type evaporative cooler offers them more efficient cooling per dollar than any other comparable unit.

Long Life and Easy Operation — Alton coolers last longer, with their all-galvanized cabinets, and are easier to install and operate. You will appreciate the elimination of service calls.

GET THE FACTS!

WRITE TODAY!

Please send complete information about the Alton "Air Washer Type" Evaporative Coolers.

ALTON MFG. CO.,
1112 Ross Avenue,
Dallas, Texas

Name .....

Address .....

City ..... State .....

Closes easily without tools



in a positive lock!

You can squeeze it oval—or cut it with a hacksaw— *after assembly!*





Jenkins SPEED-LOK* Pipe

No tools! Close pipe with your hands. Male seam is permanently locked into female slot by a tab every 6". First tab is 3" from end. Won't break.

- Aluminum or galvanized
- From 4" up to 36"
- Convenient 5' lengths
- Shipped nested
- For heating or ventilating

Jenkins TITE•AIRE* Pipe Connector

Slide pipe into connector and turn two aluminum thumb-screw type worms. No paper, paste, wire, drilling. No crimps to slow air flow. No seals required.

- Ready to use
- 24 in a carton
- From 4" to 100" sizes
- With or without damper
- Aluminum, galvanized, heavy gage, copper or monel

*Patented



Assemble 20' of Speed-Lok Pipe, ready to install, in a minute. Four 5' sections in photo are locked rigidly by 3 connectors. No distortion.

A complete line of matching accessories and perimeter fittings



Write for Bulletin JTA-53-AA

RALPH MANUFACTURING CO. INC.
P. O. Box 188 Wadsworth, Ohio

YOU ALSO GET THE

BIG SIZES

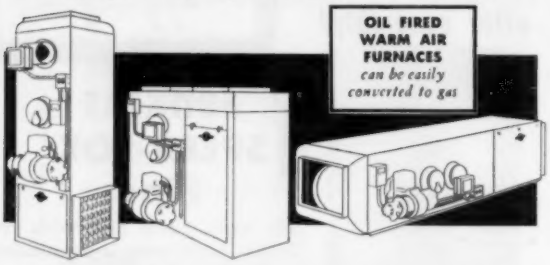
in the BESSER line!

A COMPLETE RANGE OF SIZES . . .

from 75,000 BTU to 500,000 BTU

A COMPLETE LINE OF MODELS . . .

Horizontal • Vertical • Basement
Downflo • HiBoy • LoBoy • Suspended



Plus **SPECIAL ORDER SERVICE** *on any size unit* **UP TO 1,000,000 BTU**

For jobs that require units larger than 500,000 B.T.U., Besser offers fast, reliable Special Order Service. We have the facilities to build any type unit required, up to 1,000,000 B.T.U. output. Every "special order" is built to the same high standards of the regular Besser line. Whatever your need, we can build it!

And now! **A NEW PROFIT-MAKER JOINS THE BESSER LINE**

Revolutionary

HORIZONTAL Summer AIR CONDITIONERS

for Residential or Commercial installations

Combining space-saving "horizontal" design with an entirely new cooling principle, Besser Summer Air Conditioners bring central air conditioning within the reach of almost everyone. Designed for installation and operation in conjunction with central heating systems, units are fully adaptable to either warm air or hot water heating. Greatly increased efficiency lowers initial and operating costs through use of smaller units.

Available in 2, 3 and 5-Ton units.

"Only the BEST goes into a BESSER!"

BESSER WARM AIR FURNACES
Summer AIR CONDITIONERS

The Complete Line for Year-Round Profits

BESSER METAL PRODUCTS CORP., P. O. BOX 4064, CHARLOTTE, N. C.

we hear that . . .

has a manufacturing capacity of 100,000 window air conditioning units a year. Production was scheduled to start early in January.



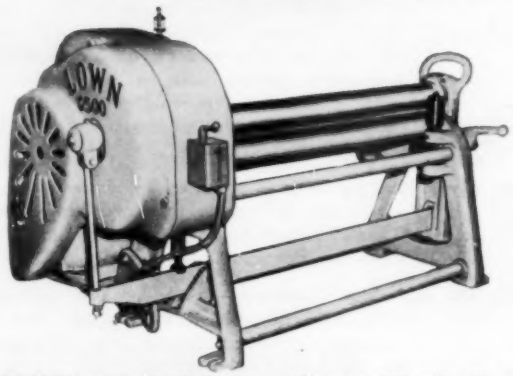
WITH THE STATION wagon demonstrator developed by the Combustioneer Div., salesmen can take a low pressure oil burner to the customer for a demonstration

THE COMBUSTIONEER DIV., Steel Products Engineering Co., is finding the use of a station wagon demonstrator an effective aid in selling low pressure oil burners. The salesman can quickly and easily give a complete demonstration to the customer by opening the station wagon door, pulling the burner out on its sliding track and plugging into any convenient 110 volt outlet.

UNITED STATES RADIATOR CORP. is conducting an air conditioning school for its entire field personnel. Par-

LOWN SLIP ROLL FORMING MACHINES

Model G-500
featuring Cone Rolling Attachment



Model G-550 Lown Slip Roll Former with 5" x 50" rolls, all power driven

A new improved modern design, engineered for durability, strength and service.

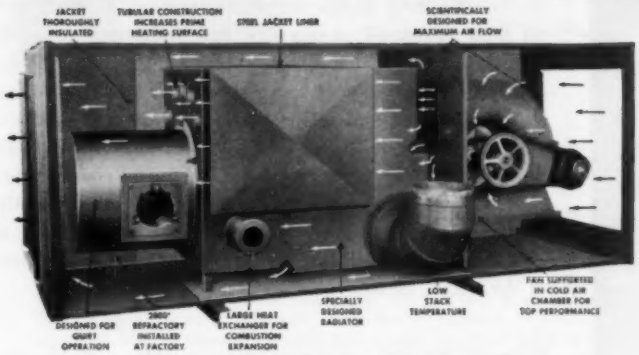
- **Initial Pinch Type — Alemite Lubrication**
- **Capacity Model G-550, 8 - 10 gauge 4' wide. (Available in shorter or longer lengths)**
- **Quick Acting Latch on Drop Arm.**
- **Handwheel Adjustment of Rear Roll.**
- **Roll Position Indicators.**
- **Gear and Shaft Housing of rigid Unit construction.**
- **Fast, sturdy, easy to operate. Prompt Deliveries.**
- **Other machines with 2" to 9" dia. rolls also available.**

Dealers in Principal Cities *Write for Bulletins—Mention this Ad*

SAN ANGELO FOUNDRY & MACHINE COMPANY
1200 Park Ave. **Mt. Vernon, Illinois**

Wondaire

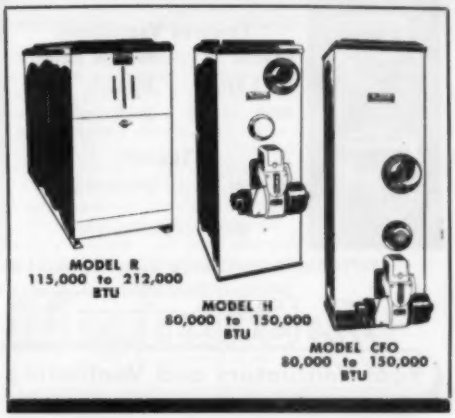
. . . OUTSTANDING DESIGN, PERFORMANCE and SALES!



SELL TROUBLE-FREE, OIL FIRED HEAT

Cash in on the tremendous demand for horizontal-type furnaces —write for attractive dealer or jobber sales plans. Increased production brings better delivery—and you can meet or beat all competition for practical, well-made, efficient furnaces. Domestic furnaces have same outstanding features, high quality construction and efficient performance as the horizontal-type units. Write, wire or phone **today** for complete details!

Expansion of plant facilities enables us to add a limited number of jobbers and dealers to our lists. Wondaire, without a doubt, is the world's finest horizontal-type oil or gas fired furnace. Sizes from the smallest to the largest are available including: 80,000; 95,000; 115,000; 150,000; 225,000; 300,000 and 400,000 BTU. —Specially-designed tubular construction provides highest efficiency. Shipped completely assembled — all parts standard and nationally known. Become a Wondaire jobber or dealer NOW!

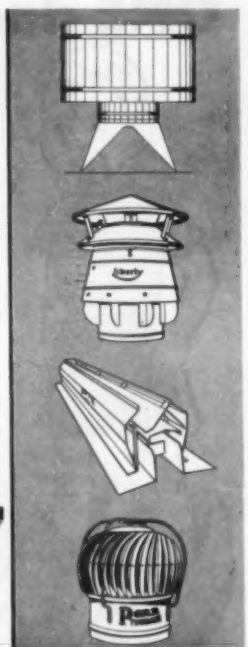


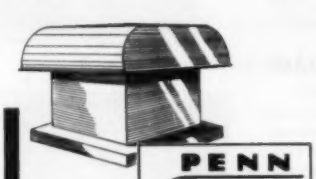
COX MANUFACTURING COMPANY
RIDGEVILLE, INDIANA
EXCLUSIVE MANUFACTURERS OF WONDAIRE DESIGNED FURNACES

WORLD'S FINEST OIL OR GAS FURNACES

PENN VENTILATORS

Perform Efficiently . . . Economically!

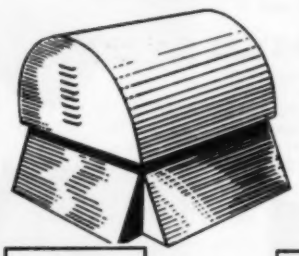




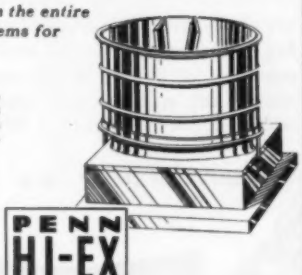
There is a type, size and capacity for all your ventilating requirements. Efficient and economical Penn Ventilators are easily installed and last long, providing years of trouble-free, inexpensive ventilation. They have been removing dust, vapors, smoke, heat, fumes and odors from public, commercial and industrial buildings for more than a quarter of a century.

Write for descriptive literature on the entire line or send us your specific problems for qualified recommendations.

Manufacturers of:
Propeller Fan—Centrifugal Fan, Stationary, Rotary and Ridge Roof Ventilators and accessory products. Representatives and distributors in principal cities.







PENN VENTILATOR CO.
Main Office and Factory
North Goodman St. & Allegheny Ave.
Philadelphia 40, Pa.

FOR MORE THAN 25 YEARS THE BUILDERS' TOP LINE! ROOF



Swartwout Roof Ventilators

for every industrial, commercial and institutional need

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Airmover — Dexter Heat Valve
Gravity Valvent — Rotary

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Airjector — Powered Valvent
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Louvers

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EXPERIENCED VENTILATOR MANUFACTURERS SINCE 1904

18511 Euclid Avenue, Cleveland 12, Ohio

The Swartwout Co.

Roof Ventilators and Ventilating Louvers

POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

we hear that . . .

ticular emphasis will be placed on the technical side of year 'round air conditioning, according to J. Roy Knox, vice president in charge of sales. "The rapid growth of air conditioning makes technical training a 'must' for all sales personnel engaged in this industry," he said. "Education is needed in order that the public will be assured basically sound specifications and full value for its investment in air conditioning." Lorin G. Miller, Dean Emeritus of the College of Engineering, Michigan State College, has been retained as technical coordinator.

W. C. McCord, president of the company, was recently elected national treasurer of Freedoms Foundation, a non-political organization dedicated to the preservation of American ideals.

WILLIAM BYNUM, executive vice president of Carrier Corp., has been elected a director of the National Association of Manufacturers.

FRANK HUDIK, president of Comfortair Co., has been named chairman of a new air conditioning requirements committee of the Federal Housing Administration. Other members of the committee are Fred Boxall, president, the Bahnson Co., and James L. Hoyer, consulting engineer. The committee was set up to establish standards for residential air conditioning for FHA.

ONE doesn't fit ALL needs!



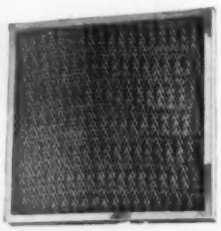
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ENGINEERED TO FIT THE JOB — RIGHT EVERY TIME

No filter does *all* jobs, meets every need. That's why Airsan Filters are engineered to the job to offer more effective dust collection. Airsan's expanded metal face plate acts as a lint arrestor to provide easier cleaning and servicing. It distributes air easily over the entire filter area. Provide high filtering efficiency and dust holding capacity with less resistance. Features include all galvanized construction and welded lock corners. Write for data.

Send for Free Bulletins

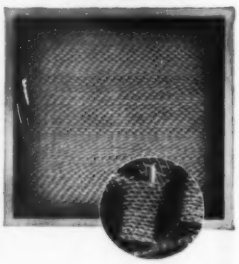
AIR FILTERS
(Low Velocity)

Viscous type, permanent and cleanable designed for industrial, commercial and domestic use. Available in 1" and 2" thickness.



VIRO-CRIMP
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Has a specially designed high velocity Viro-Crimp filter core. Hemmed edges provide a safety feature. Operates efficiently at 300 to 500 fpm. Available in 2" and 4" thickness.



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W. W. 49



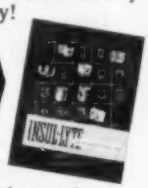
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Low cost!
Light weight!
Easily installed!
Maximum efficiency!

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A safety feature... it prevents acid burns.

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Easy to Install
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W. W. 49

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LITTLE GIANT
1954 MODEL PUMPS



Can be furnished with threaded front.

Past-performance records plus a new powerful motor and improved electrical connections . . . that's the 1954 Little Giant, finest pump ever produced! Small in size but with high-volume performance, Little Giant is hermetically-sealed for underwater use and trouble-free service.

APPLICATIONS:
- Evaporative coolers.
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- Cold drink dispenser circulators.
- Coolant circulation for machine tools.
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Available in 3 sizes . . . write for particulars on these 1954 models.

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W. Benjamin Eckenhoff and Bill L. Siebenthaler as members of the sales staff of the Viking Air Conditioning Div. of the National Radiator Co. Mr. Eckenhoff will cover eastern Pennsylvania, southern New Jersey, Delaware, Maryland and Washington, D. C. Mr. Siebenthaler will handle the Missouri-Kansas area.

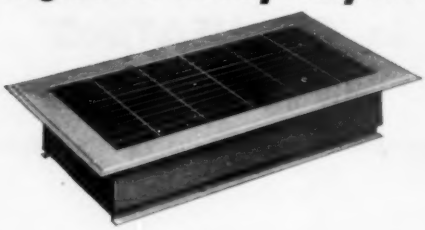
George V. Zintel, 840 N. Michigan Ave., Chicago, as exclusive representative for Baltimore Aircoil Co., Inc. in the Chicago area.

Roger E. Sherwood as general sales manager of the Lamneck Div., Clayton & Lamneck Mfg. Co. Mr. Sher-

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A new popular style register for concrete slab, basementless type home installation. Designed so that air is diffused efficiently in a 100° arc.

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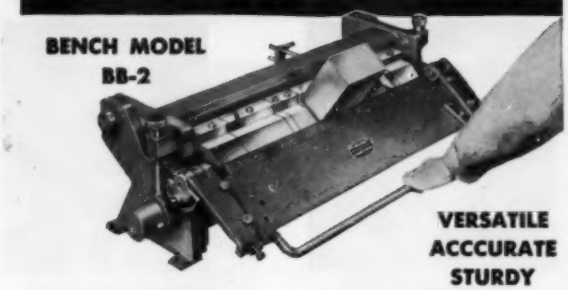
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This CHICAGO hand bending brake is ideal for bending sheet metal up to 18 gauge and 24" wide. Model and experimental shops, production departments find this machine unmatched for single pieces or production runs in folding, box and pan work, and a limitless variety of straight bending operations. Very little experience is required to do accurate and fast work.

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for biting-hot surfaces...



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AFFORDS *NEW* SELLING PROFITS!

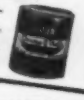
Scientific tests prove that no other aluminum paint resists the "bite" of red-hot heat better than does HI-TEMP! No temperature from 0 degree to 1200 degree F. can cause it to peel... blister... or discolor. Needs no special surface preparation; Gal. covers 800 sq. ft., brush or spray, dries in 1 hour. Dozens of uses for home and industry.

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Allen EXHAUST FANS

Whether you are working on new construction or motorizing existing ventilators, Allen Exhaust Fans will be the top-performance, quality answer to the particular ventilating problem. Easy to install, economical to operate, these fans meet a wide range of needs. In addition to the Fan Section shown above, the line includes the Remote Drive Allen Staxauster, and for wall installations, the Allen Exhaust Fan and the Lo-Noiz-Level Multiblade Fan. Our representatives are in most principal cities; names listed in our catalog in Sweet's Architectural File, Section 20b.



Remote Drive Allen Staxauster
Specially designed for applications handling corrosives and/or high-temperature air.

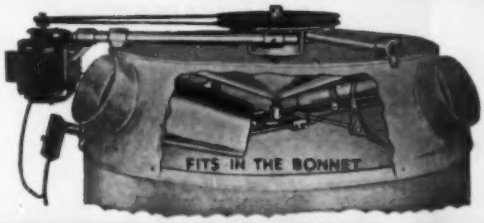
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ALLEN ENGINEERED VENTILATION

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Roof Ventilators for Every Commercial and Industrial Need

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CIRCULATAIRE ELIMINATES COLD ROOMS, BALANCES HEAT DISTRIBUTION, SAVES FUEL

CIRCULATAIRE solves the problem of "hard to heat" rooms, boosts warm air quickly through all the heating pipes. CIRCULATAIRE is easily and quickly installed without removing the bonnet. Packaged unit includes motor and fan control. No new sheet metal work required, no changing of cold or warm air pipes, no baffles to be built. The CIRCULATAIRE is rigid, quiet and efficient in operation.

NOW READY — *New CIRCULATAIRE Sales Aids add effectiveness to selling interview, conserves valuable selling time and increases sales.*

A COMPLETELY PACKAGED UNIT
Nothing for the dealer to furnish except limited amount of labor.



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Hardened
Screwnails

for fastening
SHEET METAL to WOOD
WOOD to WOOD
or other fastenings
where you need
NAIL DRIVING SPEED with
SCREW HOLDING POWER

Ask your P-K Distributor for samples and the SCREWNAIL folder, or write: Parker-Kalon Division, General American Transportation Corporation, 200 Varick St., New York 14.

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appointments . . .

wood joined the firm in 1934. Since 1945, he has been connected with the production, planning and shipping departments.



J. W. Bodwell



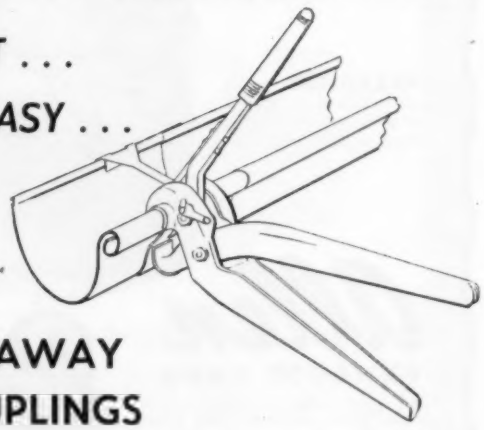
M. B. Monson

JOHN W. BODWELL as manager of the work order department of the Chicago plant of Joseph T. Ryerson & Son, Inc. Previously he was manager of the Cleveland work order department. Melvin B. Monson, formerly manager of the Chicago work order department, has been named assistant manager of the company's Milwaukee steel service plant.

CENTRAL FUEL EQUIPMENT CO., 7450 Sheridan Rd., Chicago, as Midwest furnace distributor for International Sales Co.

SPLICE GUTTERS WATER TIGHT

FAST . . .
EASY . . .
With



MELAWAY
COUPLINGS

Adjustable for 4-5-6" half round gutter.

Will align gutter and square miters. Gutters may be joined at the eave as easily as on the ground.

Prevents expansion damage to gutter. The only satisfactory method for repairing gutter. Applicator guaranteed.

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BRANDON, WIS. PHONE 1361

appointments . . .

ALFRED C. DROUILLARD as manager of furnace development for Jackson and Church Co. Mr. Drouillard was formerly a project engineer with Bryant Heater Div., Affiliated Gas Equipment, Inc.



A. C. Drouillard



R. M. Stroud

ROBERT M. STROUD as representative in Michigan and northern Ohio for the Sall Mountain Co. He will handle the company's line of asbestos fireproofing and insulating materials.

ALFORD E. GAILEY as manager of the heating equipment division of Joss Brothers Fuel & Heating Co., Rochester, N. Y., distributor for Iron Fireman Mfg. Co. Fred J. Schuster, Schuster Sheet Metal Works, Chehalis, Wash.,

Make Stronger Fastenings this easy way



P-K

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DRIVE EASILY into mortar, cinder blocks, and other soft masonry without pilot holes . . . into predrilled holes in harder materials. **HARDNESS and TOUGHNESS** perfectly balanced . . . they drive in straight to stay tight, even under shock or vibration.

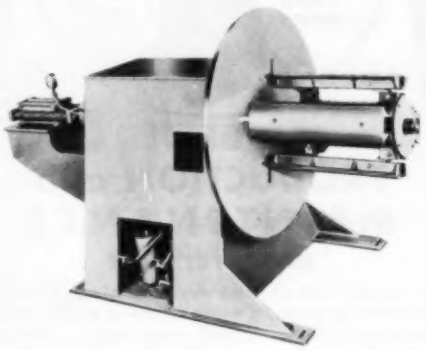
COST YOU LESS and are much simpler to use than plugs, expansion bolts, other devices. Samples free . . . try them. Ask your P-K Distributor, or write: Parker-Kalon Division, General American Transportation Corporation, 200 Varick St., New York 14.

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Self-centering Coil Reels by "DAHLSTROM".

Complete line of hydraulically expanded coil reels; all steel fabricated; Timken Tapered and self-aligning roller bearing mounted. Uses a mechanical type drag brake which is adjustable to create constant tension and prevents over-running.



Capacities from 2,000 lb. to 20,000 lb.
Width up to 60".
Simplified operation and maintenance.

Also Available as motor-driven with loop control.

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The World's Most Accurate DRAFT CONTROL

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Ordinary chimney drafts fluctuate from .02 to .25 inches or more, due to varying winds, atmospheric conditions and temperature changes. A draft control should compensate for all of these changes and hold a constant pull on the heating unit correct for that particular heater. Without a good draft control, every variation in the chimney draft causes a change in CO_2 reading, resulting in increased cost of operation.

The BOSTON-STANDARD DRAFT CONTROL with its patented CENTER-MOUNTED GATE, will hold the proper draft on the heating unit constant.

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BOSTON MACHINE WORKS COMPANY

Oil Heating Supplies Division, Manufacturers, Lynn, Mass.

FLANGES THE DUCT

IN LESS THAN 5 SECONDS

Works like a bar-folder with a new twist.

Handling the work back and forth has been eliminated by a unique manipulation of the bender itself.

"Best little tool in the shop"



No money tied up in idle equipment . . . And no time wasted in making adjustments . . . Fits any size ducts up to width of bender and any thickness up to 20 gauge mild steel.

No. 12 SMITH'S CLEAT BENDERS (12" Wide) $46.20*
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*Prices subject to change without notice)
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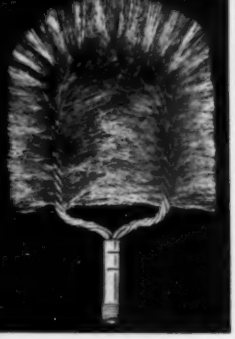
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SCHAEFER DOUBLE STEM HORSE SHOE STYLE

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SCHAEFER BRUSH MFG. CO.
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BUY SCHAEFER ...IT'S SAFER

appointments . . .

will sell and service the company's equipment throughout Lewis County. Daniel Bellavigna, Bogota, N.J., heating contractor, is also handling the firm's heating equipment.

E. R. GLAUBER as national sales manager for air conditioning equipment for Emerson Radio and Phonograph Corp. Mr. Glauber will continue in the capacity of director of Emerson distributing companies in addition to assuming his new duties.



E. R. Glauber



E. S. Bishop

E. S. BISHOP as factory representative to handle burners, furnaces and pre-fabricated chimneys in part of the New England area for Robot Auto-Heat Corp.



for BETTER PRODUCTION and MAINTENANCE
at Lower Cost

A proved time-saver in any sized shop. Libert's *flexibility* gives you a wider variety of work—clean shearing of flat or formed sheet metal... straight or irregular shapes... inside or outside cuts. Libert *simplicity* means that even unskilled labor soon does accurate work, lots of it *and fast!* Write for Bulletin.

Made in sizes up to 60 in. throat, 10 gauge capacity

LIBERT MACHINE CO., GREEN BAY, WIS.

Libert Hi-Speed SHEAR

CENTURY **TORCH-O-MATIC**

FOR FASTER, EASIER SOLDERING
BRAZING—MELTING—



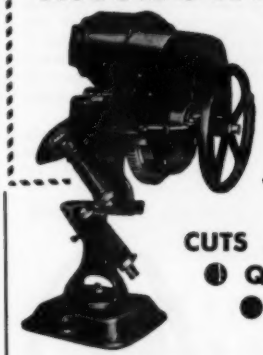
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Instant, one-hand operation saves time, gas, and eliminates open flame hazards when not in use. Just pull the trigger and the air-acetylene gas lights instantly, release and it's out! As simple as all that, and **no "time-out" to light up and adjust.** The Torch-o-matic pays for itself many times over in savings and convenience. Three sizes of tubes and nozzles to take care of any job. Will fit your present equipment. Halide Leak Detector attachment locates the slightest refrigerant gas leak. Write for the details on how Torch-o-matic can speed your operations and cut down costs.

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ROTARY
THROATLESS
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CUTS ALL SHAPES—SIZES
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Here's a shears that's right for every job. Speedy — efficient. Cuts up to ¼ inch stock — speed to 6 ft. per minute. Excellent for irregular cutting or straight splitting. Available in hand operated or motorized models. Prompt shipment. Send today for special illustrated bulletin.

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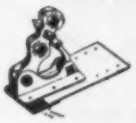
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3", 4", 5" Sizes — 2", 3", 4" Sizes

"Rival" & Fitrite" Ornamental Leader Straps — Copper & Zinc in 6 styles
SOLD THROUGH JOBBERS ONLY

ADJUSTABLE PIPE SNOW GUARDS



"FITRITE" 3 Pipes, ¾" I.P.S. For all types of steep roofs



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"FITRITE" SKYLIGHT GEARING



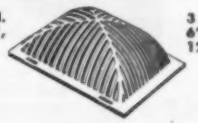
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Bronze and Aluminum



BEEHIVE 3"-8" round. Also 3" x 4", 4" x 5" square



3 Types 6", 8", 10", 12" square

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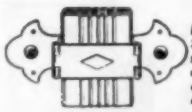
A New Vise-Grip Made Exclusively For Us



Portable Electric **SAW GUN**



"FITRITE" CAST BRONZE HINGED LEADER BAND



Made for 3" & 4" square corrugated also 3" & 4" round

"FITRITE" ADJUSTABLE SWING CHIMNEY JACK FRAME



Five sizes in one For 6"-10" pipe.

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MANUFACTURERS OF

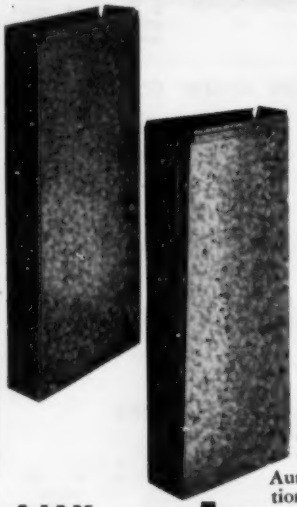
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Prefabricated Ducts,
also conductor pipe, eaves trough, drip edge, rake strip, etc.

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ALL YOUR NEEDS In DUCTS and FITTINGS



AJAX

- Highest Quality
- Precision Made
- Quick Assembly
- Forced Air or Gravity
- All Systems

Fittings, Pipe and Duct are die cut and formed, fit up tight and fast with AJAX Automatic Snap Lock connections.

For extra profits, use AJAX Pipe and Fittings to save you installation time and labor.

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New complete line catalog complete with helpful data.

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216-20 E. Front St.

Cincinnati 2, Ohio

DIVISION Of THE CINCINNATI SHEET METAL & ROOFING COMPANY

appointments . . .

HARRY G. JOHNSON as general manager for Klemm Automotive Products Co. Previously Mr. Johnson acted as a manufacturer's representative for the firm, covering the southeast part of the country.



H. G. Johnson



W. M. Milbourne

W. M. MILBOURNE as sales representative for the Duo-Therm Div., Motor Wheel Corp. Mr. Milbourne was formerly sales manager for the Calcinator Corp.

EMORY C. PERRY & CO. as sales agent in the state of Michigan for Metalbestos Div., William Wallace Co.

R. C. SCHNEIDER CO., Wauwatosa, Wis., as representative in the state of Wisconsin for Maid-O'-Mist, Inc.

CLEAN EVERY TYPE of FURNACE



with a

GRAND RAPIDS *de luxe* FURNACE CLEANER



Large air volume and high velocity give the Grand Rapids Furnace Cleaner maximum recovery capacity. This means faster, more efficient cleaning for every type of furnace or boiler . . . plus more jobs and larger profits for you. Standard groups of attachments available with each Furnace Cleaner are designed to reach into and clean every part of the heating plant.

Service your furnace cleaning jobs with a Grand Rapids DeLuxe Furnace Cleaner. It is sturdy, long wearing and constructed to do a thorough cleaning job under the roughest conditions. Write today for information.

DOYLE VACUUM CLEANER CO.

227 Stevens St., S.W. Grand Rapids 7, Michigan

INSTANT LIGHTING **Insto-Gas** T M REG U S PAT OFF

SOLDERING IRON HEATER



Sheet metal contractors can now have hot soldering irons in 2 minutes and with Insto-Gas they can be kept at the desired temperature all day long without even looking at the heater. Insto-Gas saves 40% on fuel cost and enough time to pay for the entire equipment in one week's operation.

The Insto-Gas soldering iron heater when attached to the cylinder by 50-ft hose can be operated on a scaffold or roof without moving the cylinder.

INTERNALLY FIRED SOLDERING IRONS

These Insto-Gas soldering irons are designed for continuous operation with no stopping to change irons. Made in two sizes; the No 1-S (2) for fine work and the No 2-S (5) for heavy soldering.

Listed by Underwriters Laboratories and Factory Mutuals Laboratories



Write For Free Folder

INSTO-GAS CORPORATION
DETROIT 7, MICHIGAN

ANGLE RINGS



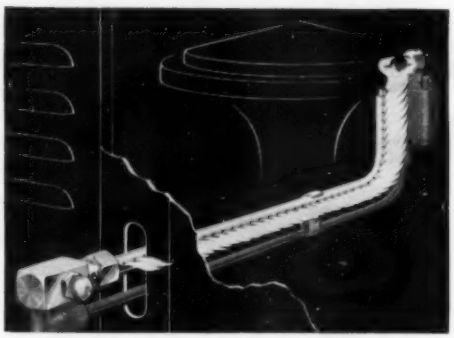
You'll save time and effort by getting the ring that can be fitted on the job easily.
We roll angles, tees, channels, bars and special shapes to fit your individual needs — with or without rivet or bolt holes.
Angle Rings are used for many purposes such as reinforcing tanks, joining pipe or smoke stacks, and installing air conditioning fans. Write for our list of standard sizes and discounts — also our circular describing our complete fabricating services.

NATIONAL METAL FABRICATORS

2140 So. Sawyer Ave. Chicago 23, Ill.

The MODERN LIGHTER TUBE

With the Slanting Blue Flame



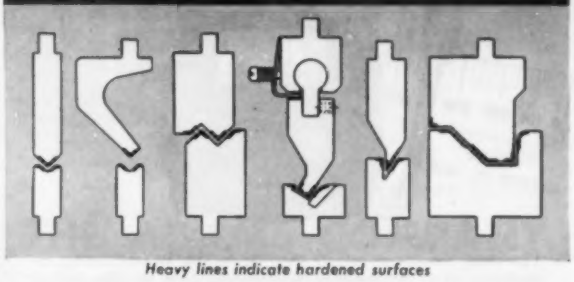
OUTSIDE LIGHTING IS HERE!

for FURNACES • WATER HEATERS • BOILERS • INCINERATORS

- ★ SAFE as the unit it serves.
- ★ DEPENDABLE as the gas supply.
- ★ SIMPLE as the scratch of a match.
- ★ CONVENIENT as the touch of a button.

MODERN MATERIALS COMPANY
Northville, Michigan

CHICAGO INDUCTION HARDENED
PRESS BRAKE DIES



Heavy lines indicate hardened surfaces

for greater die life—
at no extra cost—
on any make press brake

Whether it is a simple die for angle bending or the more complex dies for any of the combined bending and forming operations, CHICAGO induction-hardened dies offer bonus performance at no extra cost. Field reports on these dies show better than ten times the useful life of the conventional heat-treated dies used in press brakes. Get the full particulars on CHICAGO dies for your next press brake job.

Steel Bending Brakes For Over Fifty Years 4901

DREIS & KRUMP MANUFACTURING COMPANY
CHICAGO
7404 S. Loomis Blvd., Chicago 36, Illinois

OBDYKE

IMPROVED EAVES TROUGH FOR BETTER JOBS



No More Ragged, Sagging Inner Edges

Our hemmed and fluted inner edge combines great strength with safer handling at no extra cost to you. Try it and join the ranks of satisfied users. . .

SEE YOUR JOBBER

BENJAMIN P. OBDYKE, INC.
443-453 N. 8TH. ST. PHILADELPHIA 23
Manufacturers of roof drainage products



- *A practical, accurate air velocity meter for heating, air conditioning, and ventilating work. Indispensable for measuring grille velocities and air deliveries from registers and grilles; for balancing forced air heating systems, and for checking air distribution of all kinds of ventilating systems.*
- *Accurate velocity readings, automatically averaged over a 3" dia. free area, instantly indicated in feet per minute.*
- *Extension handle facilitates positioning of instrument away from the observer for readings in hard-to-reach locations, or where the observer's body would interfere with the normal air movement.*
- *Unique scale lock makes possible to retain scale reading when desired until the lock is released—an indispensable feature where extension rod is used to position instrument away from the observer.*
- *Leather case is furnished as standard equipment for added protection when the instrument is not in use and for convenience when carrying it in the pocket.*

Ask your Jobber for the FloRite or write for Leaflet 760.

BACHARACH INDUSTRIAL INSTRUMENT CO.
7301 PENN AVENUE • • PITTSBURGH 8, PA.

appointments . . .

HARRY B. SCHLOSSER, formerly president and general manager of the Lee Corp., as exclusive representative for Arthur A. Olson & Co. in Philadelphia and Baltimore. Mr. Schlosser has formed the Harry B. Schlosser Co., with offices in Wilmington, Del.



H. B. Schlosser



W. B. Ott

WILLARD B. OTT as assistant sales manager of the Building Products Div., Philip Carey Mfg. Co. In his new position, Mr. Ott will be concerned primarily with the distribution of "Thermo-Bord," a structural and insulating panel.

WILLIAM A. YOUNG and his son, William J. Young, as factory representatives covering southern New Jersey, Maryland, and Delaware for Boston Machine Works Co.

BIG PROFITS FOR METAL DEALERS



Get CHEM-O-GLAS facts

IT MAY PAY YOU WELL to get full details on PROFITS now possible through use of these shatterproof, translucent, chemical-glass sheets.

Only one of its type L.A. Code Approved as "Flame resistant." Colorful. Colorfast. Fadeproof. Maintenance-free. No paint needed—ever. Precision-molded under 400,000 lbs. to give greater strength of 26,000 psi, and absolute uniformity throughout. 5 colors in flat, or exclusive RIBBED shape so easy to install without costly special moldings. Small ⅞" rib overlap saves up to 5¢ per sq. ft. Get facts!

"Tomorrow's Product"—available today. For complete facts, prices, free "Idea Folder" or name of nearest dealer, tear out coupon, now. Mail when convenient.

FLAT CHEM-O-GLAS ENDS BREAKAGE

Use as replacement for standard glass.

NEWEST USE: To replace glass in Jalousie or Louver Windows. "Le's light in; keeps sight out." 5 colors.

(Dealers: write for franchise details.)

CHEMOLD COMPANY, Dept. AA-1
2000 Colorado Ave.
Santa Monica, Calif.

RUSH ME: ☐Chem-O-Glas "Idea Folder." ☐ Name of nearest dealer. ☐ Dealer franchise data.

Name.....
Company.....
Address.....
City.....State.....

SEND NOW

WHITNEY-JENSEN
METAL WORKING TOOLS
FOR 43 YEARS



A lightweight tool that has found wide acceptance because it is durable, powerful, easy-to-use. The No. 5 Jr. has an adjustable locating stop clearly graduated to permit quick setting to any throat depth up to 2". Furnished complete with seven punches and dies in strong metal carrying case. Capacity, ¼" hole through 16 ga. mild steel. Overall length, 8¼"; height of gap, ¼"; weight, 2¾ lbs.

Write for our latest catalog.

WHITNEY METAL TOOL CO.
91 FORBES STREET • ROCKFORD, ILLINOIS

WEBCO *the portable*

SHEET METAL BENDING BRAKE



The WEBCO brake offers the Slip End, Sliding Folding Fingers, and many other important features. The WEBCO will make bends up to 52°. Write for detailed information to:

HALLMOR INC.
McMURRAY ROAD
BRIDGEVILLE, PA.

IT WILL TAKE MORE IN FIFTY-FOUR!

Join the

MARCH OF DIMES

JANUARY 2 to 31



ADAMS
Flue Thimble
(Cast Iron)

Adams Cast Iron Flue Thimbles Insure Permanence, Tighter Fit, Better Draft.

Sizes 4 to 12 inches

Buy Adams Known Quality

THE ADAMS COMPANY

Bridge Street • Established 1883 • Dubuque, Iowa

classified advertising . . .

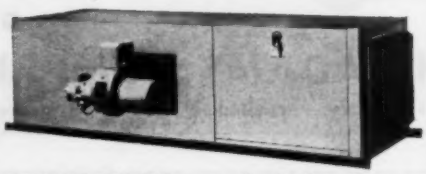
Is the quick, economical way to find what you're looking for. Check the classified page each and every issue for real bargains and hard to find items. It's a quick and sensible means too, of disposing of tools, equipment, and anything else for which you no longer have use. Check the classified page for rates.

√ Check your needs . . .

- ☐ *Personnel*
- ☐ *Equipment Sales*
- ☐ *Equipment Needs*
- ☐ *Manufacturers Agents*
- ☐ *Lines, etc.*

Whatever your needs in any of the above classifications . . . you can solve them quickly with a classified advertisement. The space rates are reasonable and results are quick. Closing date — the twentieth of the month preceding issue.

QUIET AUTOMATIC
OIL FURNACES
SUSPENDED
Or Laydown Air Conditioning
FURNACES



SPACE SAVER...and a Labor Saver
It comes completely assembled including combustion chamber. For Garages, Service Stations, and Basementless Homes. Made in sizes from 75,000 BTU to 600,000 BTU.
Approved by Leading Oil Companies, Underwriters and Municipalities. WRITE TODAY FOR FULL DETAILS

A PRODUCT OF
QUIET AUTOMATIC BURNER CORP.
J. G. KAVENY, President
33-35 BLOOMFIELD AVE. NEWARK 4, N. J.

appointments . . .

HARVEY F. SMITH as sales manager of the Pittsburgh warehouse of Follansbee Steel Corp. Mr. Smith, who formerly served as manager of stainless steel sales for the warehouse, will direct all sales activities in western Pennsylvania, West Virginia and Ohio.



H. F. Smith



Morris Chapman

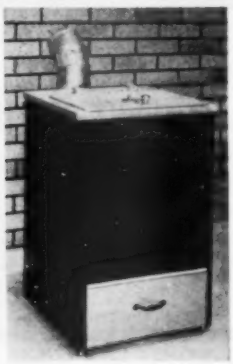
MORRIS CHAPMAN, Framingham Centre, Mass., as manufacturer's representative in western Massachusetts, Vermont, New Hampshire and Maine for Acme Heating Div., United Tool & Die Co.

BILL L. GAINES as sales engineer for the south central division of the Wales-Strippit Corp. Mr. Gaines will operate out of the St. Louis division headquarters, handling most of Indiana, Illinois, Missouri and Kansas.



RID-ALL

The finest incinerator made
Gas-Fired-and-Natural-Draft-Models.
Write for literature and prices.
GILT Edge Furnace and Boiler Repair Parts Always in Stock
SCHWAB FURNACE CO.
332 W. Florida St. Milwaukee 4, Wis.



KIRK-BLUM



...One piece
BLOW PIPE ELBOW
SAVES YOU MONEY

- HOODS
- BALL JOINTS
- FLOOR SWEEPS • BLAST GATES
- STAMPED AND ROLLED ANGLE RINGS

Cheaper and stronger than the ordinary pieced elbow, KIRK & BLUM'S One-Piece Elbows are rolled into a tube, then crimped on an exclusive machine to form a super tight, rigid elbow. These and other blow pipe parts, made in production quantities, are superior, cost less than the ordinary kind. Made in light to heavy gauges, from 3-inch to 14-inch diameter. Write for literature and prices.



Ball Joints Any Size

THE KIRK & BLUM MANUFACTURING CO.
3180 FORRER ST. • CINCINNATI 9, OHIO



Super Red Streak Model SH—Approved by Underwriters' Laboratories and Canadian Standards.

Added Income, Bigger Profits, The Easy Super Red Streak Way
Clean all kinds of heating plants faster and easier with a Super Red Streak Model SH Furnace Cleaner. Helps sell repairs, new plants. Both wet and dry pick-up. Cleans chimneys from basement. Special non-clog filter bag for oil plants.
Ask your wholesaler. Write for free Super Sales Plan Book.

NATIONAL SUPER SERVICE CO., INC.
1944 N. 13th St. Toledo 2, Ohio
Sales and Service in Principal Cities.
In Canada: Plant Maintenance Equipment Co.
Toronto, Montreal, Vancouver



SUPER SUCTION®
SINCE 1911
"THE DRAFT HORSE OF POWER SUCTION CLEANERS"

THOR QUALITY TOOLS

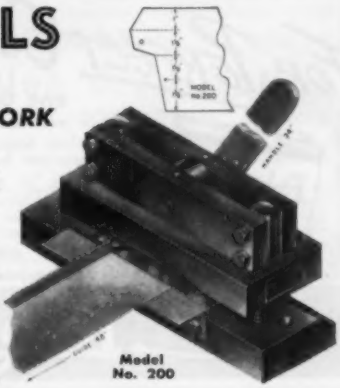


ARE TIME AND MONEY SAVERS IN HEATING AND VENTILATING DUCT WORK

THOR GOVERNMENT LOCK DIES shear — punch a 5/32" hole — and mark point at breakline all in one operation. No waste of time for punch press set-up.

Model No. 100, Capacity 22 ga. $ 95.00
Model No. 200, Capacity 18 ga. $160.00

THOR UNIVERSAL CLIP PUNCH—MODEL NO. 300-1
Capacity: 3 sheets of 20 ga. mild steel. New sensational tool for fastening gov't. locks and standing seams in all kinds of sheet metal work. Price, $42.50



See your local dealer or write for literature and samples of metal sheared in above tools.
Thor Tool and Die Co., 865 Estabrook St., San Leandro, Calif.

Copper - Brass - Bronze
Perforated
TO YOUR REQUIREMENTS

PERFORATED METALS
FOR ALL INDUSTRIAL USES
ARCHITECTURAL GRILLES
New Catalog, No. 39, gives complete information.
DIAMOND MFG. CO.
BOX 34 WYOMING, PA.

the NAME that MEANS what it SAYS!

TiNiT



AT LOWEST TEMPERATURES

TINS and CLEANS ALL METALS IN ONE OPERATION
Cleans, tins, fluxes; flows into joints, bends, corners; penetrates rust, paint and grease.
Other TINIT products: Soldering Salts, Paste, Welding and Brazing Fluxes, Tinit Hand Cleaner.
Ask your jobber or write for details
TINIT MFG., CO., INC. 1635 Platte St. Denver, Colo.



ORNAMENTS
STAMPINGS & SPINNINGS
Zinc Ornaments Available From Stock. Copper, brass, bronze, aluminum and stainless steel ornaments made up promptly.
If you don't have catalog K, send for it NOW.
MILLER & DOING
89 ADAMS STREET BROOKLYN, N. Y.

VERSATILE!

CONNECTICUT COMBINATION BRAKES



Made in 3 and 4 Ft. lengths, bench models or floor models with folding legs. Combination Brakes may be purchased with or without box and pan fingers. They incorporate all the quality and ruggedness of our larger Brakes, plus the combination feature.

Write for Catalogue Showing our Full Line of Bending Brakes
W. WHITNEY STUECK, INC.
FERRY ST., OLD SAYBROOK, CONNECTICUT

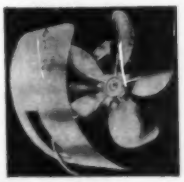
HEAT THAT COLD ROOM

LOW COST FORCED AIR



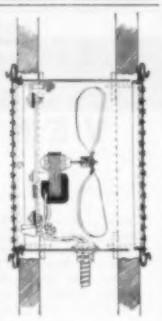
Circulation thru the whole house for $100 or less, installed. 1 hour job should show $40 profit. Really works!

VENTILATED BOOSTER FAN



Runs cool in hot air pipes. Forces heat to cold room. Installs in 30 min. Make a satisfied customer for under $15.

INTERWALL FAN



Good looking, quiet, concealed in the wall. Extends heating or cooling to adjoining rooms. Ventilates television rooms, offices.

McLARTY SYSTEMS
2601 DICKMAN ROAD BATTLE CREEK, MICH.

FOR LOW COST SPECIAL PURPOSE FANS, WRITE TODAY

FOR PERFECT SOLDERING

and GREATER PROFITS

in less time use Rubyfluid, the fast acting easy-to-use soldering flux that wets out freely, properly conditions metal for a strong union. No objectionable or harmful fumes. See your jobber or write direct for special $1.00 offer.

RUBY CHEMICAL CO.

74 S. McDowell St. Columbus 8, Ohio



Rubyfluid

-BB-

AVAILABLE AGAIN —

STAINLESS-STEEL

"PRE-WAR" QUALITY.
ROOF DRAINAGE.

FULL LINE

EAVE TROUGH HALF ROUND
STYLE "K" GUTTER
CONDUCTOR PIPE
ALL FITTINGS AND ACCESSORIES.

SOLD THRU LEADING JOBBERS EVERYWHERE

BERGER BROS. CO.

229-237 Arch Street Philadelphia 6, Pa.

appointments . . .

JOHN L. HARVEY CO., with offices at 121 S. Monroe St., Spokane, Wash., as representative for Trion, Inc. Territory includes parts of Washington, Idaho and Montana.

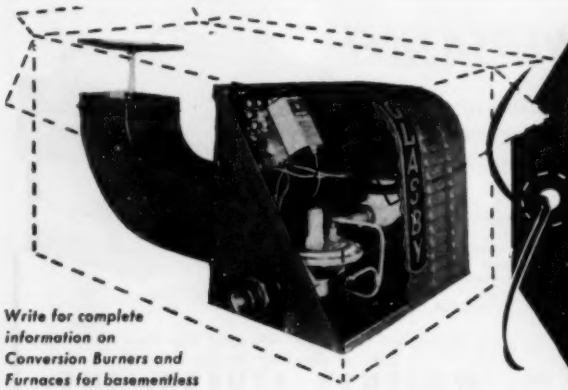
Obituaries

John S. Clark

JOHN S. CLARK, founder of the J. S. Clark Co., died on Tuesday, December 1. Mr. Clark was the first president of the Sheet Metal Contractors National Association, which he helped to found at a meeting held in Detroit in 1944. He was well known in the sheet metal and heating field for his active participation in association work. Because of his outstanding services in the field he had been named a permanent director of the Detroit Warm Air Heating Association.

G. L. Harrison

G. L. HARRISON, a member of the board of directors of Perfection Stove Co., died November 19 at his home in Cleveland, following a long illness. He was 78 years old. Vice president and general manager of Perfection Stove Co. until his retirement in 1947, he had been associated with the company for 41 years.



Write for complete information on Conversion Burners and Furnaces for basementless and semi-basement homes.

GLASBY

GAS CONVERSION BURNER

A package unit that will convert heating units without expensive construction or follow-up service calls. Quick profit-maker requiring no heavy investment. Factory assembled, tested and guaranteed. Models cover 85,000 to 300,000 BTU's.

J. P. GLASBY MFG. CO., Inc.

Belleville 9, N. J.

Easy Flow

VENTILATORS



The Greenheck Industrial Turbine -- Outstanding in rugged construction -- No ventilation task too big -- Made in Sizes from 14 to 36".

GREENHECK BROS. MFG. COMPANY

SCHOFIELD WISCONSIN

MILTON SHEET METAL

MACHINERY SPECIALISTS

STOCK DELIVERY ON PEXTO, CHICAGO BRAKES, DIACRO, ROUSSELLE PRESSES, KIDDER, WHITNEY, ROTEX PUNCHES, REX WELDERS

WE CARRY A COMPLETE STOCK OF NEW & USED HAND & POWER MACHINERY.

WE STOCK PUNCHES & DIES & ADAPTERS FOR ALL PRESSES & BRAKE DIES, SHEAR BLADES & SPOT WELDER-TIPS & HAND TOOLS.

MILTON EQUIPMENT COMPANY

N.E. COR. 4th & Race St. Phila. 6, Pa.

WAlnut 2-1734

ORIGINAL REPAIR PARTS for FURNACES PUT OUT BY
AMERICAN FURNACE & FOUNDRY CO.
HOMER FURNACE CO.
MARSHALL FURNACE CO.
MONITOR FURNACE CO.
RUDY FURNACE CO.
also
Repairs for other makes such as: PENINSULAR, LAUREL, GARLAND, HOME, HOLLAND, KALAMAZOO, JEWEL, IDEAL, WILLIAMSON, AGRICOLA, ETC.
Phone 5322 — Write — Wire
LIVINGSTON, INC., MARSHALL MICHIGAN
Your warm air heating supply house

WANTED
Nat'l Selling Organization
FOR DOMESTIC GAS CONVERSION BURNER
We are the world's oldest and largest producers of industrial radiant gas burners and infra-red-ray ovens with installations in thousands of factories.
With this background, we have invented and are in production on *the most efficient and most spectacular domestic infra-red, radiant gas conversion burner ever seen* . . . AGA listed, approved by big-city utilities . . . hundreds in homes giving unprecedented performance and satisfaction. Local dealer enthusiasm has been very high — this product is "ripe" to go "national."
Being primarily an engineering and manufacturing concern, we do not have an adequate sales department for marketing this new consumer product nationally. We would like to negotiate immediately with a proven, aggressive organization for exclusive national distribution and sales.
This is NEW . . . "HOT" . . . PROFITABLE — WRITE TODAY
BURDETT MFG. CO., 3433 W. Madison, Chicago, Illinois

CLASSIFIED ADVERTISING

Classified Section: Rates for classified advertising are 10 cents for each word, including heading and address. One inch $5.00. Count seven words for keyed address. Minimum $2.00 for each insertion. Cash must accompany order.

Address Changing? Tell Us AT ONCE!

A new postal regulation relating to the handling of undelivered mail may result in some issues of *American Artisan* being thrown away instead of being returned to us — as they have been in the past — for remailing to your new or correct address.

To avoid missing any issue of *American Artisan* it is more important than ever to report both your new and old address to us and your post office. Deadline is the 18th of the preceding month for the next issue. Send changes — and new local postal delivery zone — to

AMERICAN ARTISAN
6 N. Michigan Ave.,
CHICAGO 2, ILL.

situations open . . .

SALESMAN WANTED — Mid-Western manufacturer with products going to the plumbing, heating and air-conditioning trade has opening for a full time salesman to do missionary and sales work. Give resume of qualifications. All replies held confidential. Write Key 955, American Artisan, 6 North Michigan Avenue, Chicago 2, Illinois.

Wanted Salesmen and Manufacturers representatives to represent our complete furnace line. This is one of the leading, old established manufacturers in the business. Preferred and protected territories open. Only qualified aggressive sales representatives wanted. Give full references and experience in reply. Address Key 957, American Artisan, 6 North Michigan Avenue, Chicago 2, Ill.

for sale . . .

DIAMOND SHAPE sheet metal shingles combined with *gap and leak sealing holdown cleats* have a great future. Pending Patent for sale cheap. Address Key 954 American Artisan, 6 North Michigan Avenue, Chicago 2, Ill.

wanted . . .

WANTED — A Manufacturer who understands air handling and needs something entirely new and good to manufacture. A mechanical roof ventilator incorporating "up-blast" features with positive acting dampers that eliminates separate motor operation. Fully patented. Address Key 956, American Artisan, 6 North Michigan Avenue, Chicago 2, Ill.

situations open . . .

PRODUCT MANAGER HOME HEATING EQUIPMENT — Nationally known manufacturer of gas, oil and coal furnaces seeking Product Manager for warm air home heaters. It is essential that candidate have successful experience in selling and handling dealers on a national basis, guiding development engineers in design, collaborating with manufacturing department in improving methods and cost controls. Degree in mechanical engineering desirable. Excellent opportunity for man in late thirties or early forties. Salary commensurate with responsibilities, attractive fringe benefits. Location midwest. Write Key 958, American Artisan, 6 North Michigan Avenue, Chicago 2, Ill.

. . . . are you looking around
for items or personnel
to make your organization more
efficient? A simple classified
advertisement
in American Artisan
will turn the trick
for you quickly and
at low cost.

SERVICE SECTION

ACCURATE REVOLVING VENTILATORS



Proved by years of tests and over half-a-million installations. Used for better chimney draft and down-draft prevention. Absolutely rain and storm proof.

Sizes for all chimney top and ventilation work. 3" to 36"

Stocked by leading jobbers everywhere

Write for catalog and prices

ACCURATE SHEET METAL & MFG. WORKS

2338-40 Milwaukee Ave. Chicago 47, Ill.

Increase Production with a Birks Pittsburgh Lock Opener —Opens Curved or Straight Sections





Easy to operate
Prevents injury

Only $45.00 Complete F.O.B. Factory

Birks Mfg. Co. — 811 Hanover Road — Meriden, Conn.



RUBBER LADDER SHOES

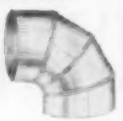
for safe climbing
$2.95 per pair

JOHNSON LADDER SHOE CO.

Eau Claire, Wisconsin

ADJUSTABLE ELBOWS

Registers and Grilles
Deliveries from Stock



Juniper Elbow Co. Inc.
72-15 Metropolitan Ave.
Middle Village, L.I., N.Y.

THE RIGHT TOOLS MEAN MORE and BIGGER PROFITS . . .
Get them from REINER & CAMPBELL

WRITE TODAY FOR LITERATURE ON OUR COMPLETE LINE.

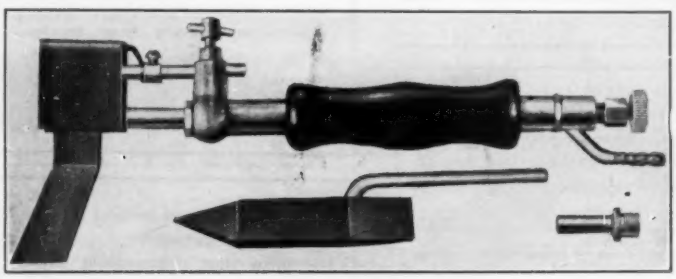


CLIP PUNCH

This new type clip punch is ideal for fastening. Slips to any kind of duct work. It will also lock standing seams and can be used on many jobs where it will replace a rivet. Will punch half-moon through three thicknesses of 18 ga.

SOLDERING IRON

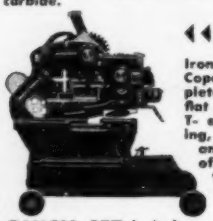
- Hot iron in one minute with any acetylene gas having a pressure of five
- pounds or more. Always the right amount of heat for heaviest as well as lightest
- soldering job.



SOLDERING OUTFIT



Will give you hot soldering iron in one minute—Soldors eight hours for 10c—Right amount of heat—No changing of irons—Make your own fuel from water and carbide.

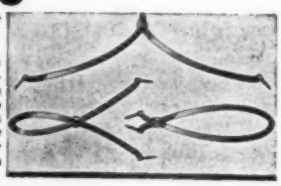


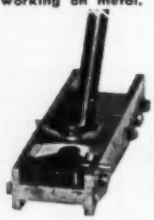
VICTORIA IRON WORKER SHEAR

Iron Worker Shear with built-in Coper, Notcher and Bar-Cutter. Complete with knives for sheet steel, flat bars, round and square bars, T- and L- iron, and cutters for coping, mounted on carriage. Accurate and clean shearing of sheet metal of any length and width. Weighs 950 lbs.

QUICK SET DIVIDERS

Quick Set Dividers are the fastest and quickest setting dividers on the market. Circles up to 48". Steel points removable; pencil may be inserted. No center punch required when working on metal.





DRIVE CLEAT NOTCHER

For notching drive cleats up to 3 in. in width, 22-ga. or lighter. Can be operated by hand or foot or can be easily mounted on the bench or on the job with clamps or bolts and screws.

REINER & CAMPBELL CO., INC.

Post Office Box 5035 Newark 5, N. J.

SHEET METAL WORKING MACHINERY & TOOLS, NEW and USED

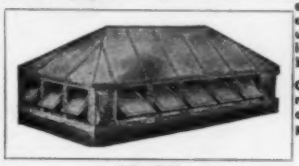
SERVICE SECTION

ALL STYLES **SKYLIGHTS** ALL SIZES

WILLIS SKYLIGHTS are designed to give a maximum of light with perfect ventilation. Constant improvement for over forty years, guarantees WILLIS customers greater value, both in construction and workmanship.

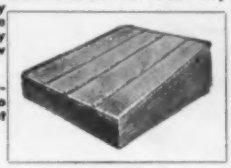
Willis skylights are constructed with condensation gutters on all bars and at the eaves to carry away the moisture. They are water-tight without the use of putty and are easily installed on old or new buildings.

Our engineering department will be glad to assist you in your skylight problems.



NO. 705

SEND FOR CATALOG



No. 505

WILLIS STEEL CORPORATION - - Galesburg, Illinois

Established in 1891

Rates for display space in the Service Section are $10.00 per inch per insertion. One-inch minimum space accepted. Closing date — twentieth of the month preceding issue.

GRAND RAPIDS FURNACE CLEANERS

Write for Details

DOYLE VACUUM CLEANER CO.

227 Stevens St., S.W.
Grand Rapids 7, Mich.



USE THIS SECTION CONSISTENTLY . . . IT WILL PAY YOU WELL!

SHEET METAL MACHINES & TOOLS

Lockformer Pittsburgh Machines
Lockformer Cleat Machines
Chicago Hand Brakes
Chicago Press Brakes
Pexto Power Shears
Pexto Foot Shears
Pexto Rotary Machines
Pexto Slip Rolls
Pexto Bar Folders
Smith Cleat Benders
Peer Spot Welders
Reed Power Rolls
Whitney Punches
Whitney Foot Presses
Wilder Slitters
Pexto Mechanic's Tools
Black & Decker Electric Tools
Bett-Morr Bandsaws

Wysong & Miles Power Square Shears

When in Chicago, visit our Machinery Showroom

COMPLETE LINE OF SHEET METAL & VENTILATING SUPPLIES

SEND FOR NEW CATALOG

CENTRAL-WEST MACHINERY CO.
335 S. WESTERN AVE. CHICAGO 12, ILL.
PHONE: HAymarket 1-0900

PROMPT DELIVERY AVAILABLE

TOOLS for the ROOFING CONTRACTOR

AXES
BEAMS
BRACKETS
BROOMS
BUCKETS
BUGGIES
CALKING GUNS
CALKING CEMENT
DIPPERS
FELT LAYER
HATCHETS
HOISTS—PORTABLE
HOISTING WHEELS
HOOKS
"HOTSTUFF"
INSULBRIC CUTTERS
KETTLES
KNIVES
LADDERS
LADDER JACKS
KNOT BRUSHES
MOPS: JEWEL, FREY PATENT, CABLE CORD, SOFT YARN, GLASS
MOP BELLS
MOP HANDLES
NAILS, CONCRETE
ROPE
SCRAPERS
SLATERS' TOOLS
TROWELS
WHEELBARROWS

FRANK P. FREY & CO.

2634 W. MADISON STREET CHICAGO 12, ILLINOIS

BUY U.S. SECURITY BONDS NOW!

FOLDING BRAKES



Easily forms angles, channels, Pittsburgh locks and all kinds of flanges, vees, zees. Handles 24, 26, 28 gauge mild steel and heavier aluminum and copper. Can be bolted to bench or truck or on included, 32" high floor stand. All steel construction. Shipped Express or Freight collect. 30" size, 95 lbs., $35.50. 36", 105 lbs., $40.00. 48" 135 lbs., $55.00. 15" VYKE BRAKE, 16 gauge capacity, $21.50.

30, 36, 48"

Order direct, cash or C.O.D., or send for folder

VYKE BRAKE CO.,
T-2439 15 St., Denver 11, Colo.

Manufacturers' Agents

Are you interested in securing additional lines?

We are occasionally asked by our manufacturer advertisers to suggest the names of manufacturers' agents in various sections of the country whom they can contact in regard to representation of their residential heating air conditioning, and sheet metal products.

If you would like your name listed in our records for inquiries we may receive on your territory, we invite you to write us. There is no charge in connection with this service.

AMERICAN ARTISAN

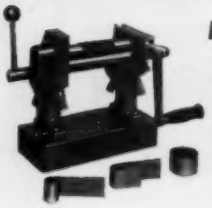
6 N. Michigan Ave., Chicago 2, Ill.

di-acro PRECISION MACHINES



I-ACRO
ARI-O-SPEED POWERSHEAR

ith shearing speeds from 30 to 200 strokes per nute, the DI-ACRO POWERSHEAR cutting cle can be set for speed of maximum efficiency each shearing operation. Continuous action minates clutch engagement for ease of opera- n and high speed production. Capacity 16 gauge el. 2 sizes—shearing widths 12" and 24".



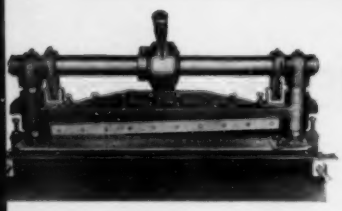
New DI-ACRO ROLLER

This revolutionary slip roll forms a perfect circle of any diameter in TWO passes through the forming rolls; also forms several bends spaced as desired in a single flat sheet. This is done by positioning the idler roll with a cam actuated lever. 8 models available. 6", 12", 18", 24", 30", 36" and 42" widths, capacities 16 to 24 gauge.



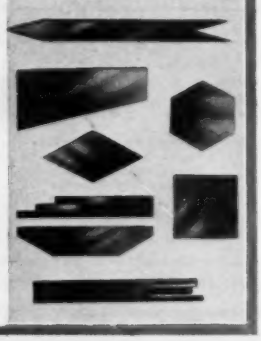
DI-ACRO
HYDRA-POWER BENDER

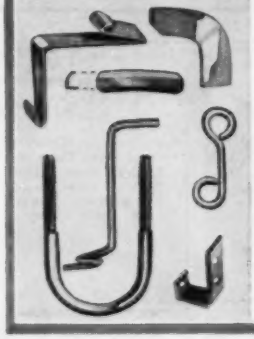
This revolutionary, standard machine is quickly converted into a "custom-built" unit exactly suited for each bending job. Forms simple and complex bends in tubing and all solid ductile materials. 2 sizes—radius capacity 9" and 24".



-ACRO SHEAR

pidly shears or squares ductile and pliable ma- ials to die accuracy. Also cuts slits, strips, ches. Capacity 16 gauge steel. 4 sizes—shearing ths 6", 9", 12", 24". (Examples of parts at right.)







DI-ACRO
BENDER

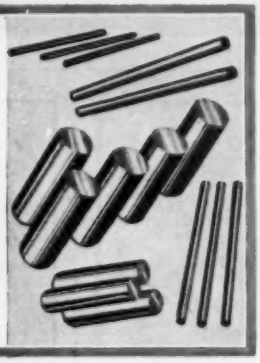
Makes simple and complex bends for "DIE-LESS DUPLICATING" of an unlimited variety of parts in tubing, angle, channel, rod, wire, molding, strip stock, etc. 5 sizes—capacity ⅛", 3/16", ¼", ⅜", 1" steel bar. (Examples of parts at left.)

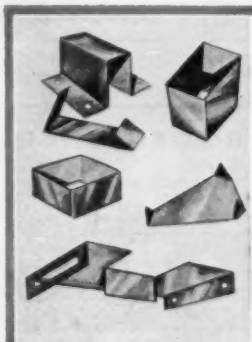


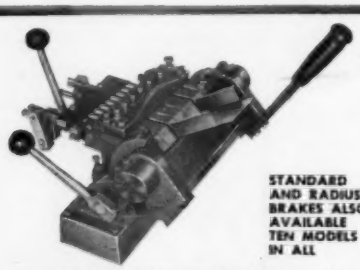
O AVAILABLE
POWER MODELS

-ACRO ROD PARTER

urately "parts off" round materials without ortion at production speeds. 2 sizes—capacity o ¾" and ⅝" round steel bar.







STANDARD AND RADIUS BRAKES ALSO AVAILABLE TEN MODELS IN ALL

DI-ACRO BOX FINGER BRAKE

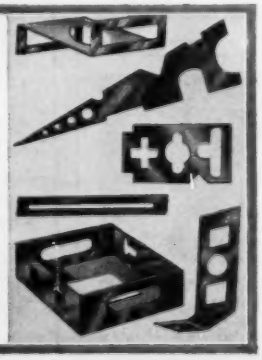
Replaces dies for experimental or production forming of simple and intricate parts. Capacity 16 gauge steel plate, forming widths of 6", 12", 18", 24".

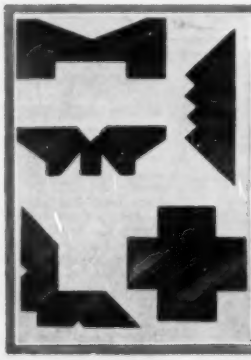


DI-ACRO
PUNCH PRESS

Punches holes of variable shapes up to 4" diameter—also serves as a precision punch press for blanking, forming, drawing. 2 sizes—throat depths 6¼" and 12¼".

POWER MODELS ALSO AVAILABLE

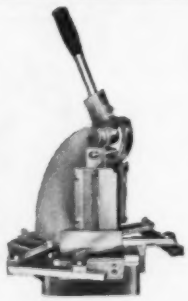




DI-ACRO
NOTCHER

Eliminates need for punch press and dies on many notching operations. Cuts 90° notches up to 6"x¼" in 16 gauge steel in one operation.

POWER MODELS ALSO AVAILABLE





DI-ACRO
pronounced
"DACK RO"

di-acro O'NEIL-IRWIN MFG. CO.

394 EIGHTH AVENUE • LAKE CITY, MINNESOTA

Send For 32-Page "DIE-LESS" DUPLICATING Catalog

Section of

JANUARY 1954

AMERICAN ARTISAN

1954

DIRECTORY

OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

Part 1.—Products Advertised In This Issue . . Page 3d

For the names of the manufacturers of products advertised in this issue, look in Part 1, where the advertised products are classified in "directory style" with the noun governing. For the page on which you will find the advertising of manufacturers in this issue, see the last two pages of this yellow Directory Section.

Part 2.—All Products Classified . . . . . Page 17d

If you want to know the names of one or more manufacturers making a certain product, look in Part 2, where all products are classified alphabetically in directory style with the noun governing (for instance, Forced Warm Air Furnaces are listed as Furnaces, Forced Warm Air).

Part 3.—All Trade Names . . . . . Page 91d

If you have the trade name of a product and want to know who manufactures it, look in Part 3, where trade names are alphabetically listed. Trade names the same as or identifiable with the company name are not listed. Manufacturers with such trade names can be readily identified under their product classification in Parts 1 and 2.

Part 4.—All Manufacturers' Addresses . . . Page 112d

For the complete name and address of any manufacturer, look in Part 4.

Index to Advertisers . . . . . Page 131d

American Artisan
6 North Michigan Ave.
Chicago 2, Illinois

This Directory Section was compiled

and is copyrighted, 1954, by the Keeney Publishing Co.,

6 N. Michigan Ave.,

Chicago 2, Ill.

Section of

American Artisan

1954 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[PART 1—Products Advertised In This Issue]

The products classified in this Part 1 of the Directory Section are only those actually advertised in this issue. For the complete listings of these and other products made by all manufacturers, see Part 2, starting on page 17d.

AIR STERILIZERS

IRON CITY CHEMICAL CO., GLYCOLATOR DIV.

ANEMOMETERS

BACHARACH INDUSTRIAL INSTRUMENT CO.

ANGLE RINGS

NATIONAL METAL FABRICATORS

BAFFLES, COMBUSTION CHAMBER

OIL EQUIPMENT MFG. CORP.

BEARINGS, PILLOW BLOCK

RANDALL GRAPHITE BEARINGS, INC.
TRIANGLE MFG. CO.

BLOWER-FILTER UNITS, WARM AIR FURNACE

BRUNDAGE CO.
FIREWEL CO., INC.
PEERLESS ELECTRIC CO.
VIKING AIR CONDITIONING DIV., NATIONAL RADIATOR CO.

BLOWERS, EXHAUSTERS

BRUNDAGE CO.
CLARAGE FAN CO.
PEERLESS ELECTRIC CO.
REDMOND DISTRIBUTORS, INC.

BLOWERS, FORCED DRAFT, ASH PIT

CLARAGE FAN CO.

BLOWERS, FURNACE, CENTRIFUGAL

AIR CONTROLS, INC.
BRUNDAGE CO.
CLARAGE FAN CO.
MORRISON PRODUCTS, INC.
PEERLESS ELECTRIC CO.
UTILITY FAN CORP., DIV. OF UTILITY APPLIANCE CORP.
VIKING AIR CONDITIONING DIV., NATIONAL RADIATOR CO.
WESTINGHOUSE ELECTRIC CORP., STURTEVANT DIV.

BLOWERS, VENTILATING SYSTEM (CAPACITY 4000 CFM UP)

AIR CONTROLS, INC.
BRUNDAGE CO.
CLARAGE FAN CO.
PEERLESS ELECTRIC CO.
WESTINGHOUSE ELECTRIC CORP., STURTEVANT DIV.

BRUSHES, FURNACE

SCHAEFER BRUSH MFG. CO.

BURNERS, CONVERSION, RESIDENTIAL, GAS

ADAMS MFG. CO.
BURDETT MFG. CO.
GLASBY MFG. CO., INC., J. P.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
OLSEN MFG. CO., THE C. A.
ZINK CO., JOHN

BURNERS, CONVERSION, RESIDENTIAL, OIL, HIGH PRESSURE

BECKETT CORP., R. W.
GILBERT & BARKER MFG. CO.
INTERNATIONAL HEATER CO.
NU-WAY CORP., THE
OLSEN MFG. CO., THE C. A.
SUNDSTRAND ENGINEERING CO.
SUN-RAY BURNER MFG. CORP.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.
WISCONSIN OIL BURNER CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

BURNERS, CONVERSION, RESIDENTIAL, OIL, LOW PRESSURE

WAYNE HOME EQUIPMENT CO., INC.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.

CABINETS AND CASINGS

ATLAS MFG. CO.

CAPS AND TOPS, CHIMNEY

WALKER MFG. & SALES CORP.

CHAMBERS, COMBUSTION, PREFORMED

INSULATING CASTABLE CORP.
OIL EQUIPMENT MFG. CORP.

CHIMNEYS, PREFABRICATED

CONDENSATION ENGINEERING CORP.
GENERAL PRODUCTS CO.
MAJESTIC CO., INC.
VAN-PACKER CORP.
WALLACE CO., WILLIAM, METALBESTOS DIV.

CLEANERS, VACUUM, FURNACE

DOYLE VACUUM CLEANER CO.
NATIONAL SUPER SERVICE CO., INC.

COILS, COOLING, DIRECT EXPANSION

AEROFIN CORP.

COILS, HEATING

AEROFIN CORP.

COMPRESSORS, REFRIGERATING, SEALED

TECUMSEH PRODUCTS CO.

CONDENSERS, REFRIGERATING, EVAPORATIVE

COLEMAN CO., INC.
CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.
YORKTOWNE MACHINE CO.

CONDENSING UNITS, REFRIGERATING, OPEN

CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.

CONNECTIONS, DUCT, FLEXIBLE

ELGEN MFG. CORP.

CONTROLS AND CONTROL SYSTEMS, HEATING

A-P CONTROLS CORP. (General)
DETROIT CONTROLS CORP. (General)

CONTROLS, COMBINATION FAN AND LIMIT, LINE OR LOW VOLTAGE

CAM-STAT, INC., DIV. PAUL HENRY CO.
CRISE CONTROLS DIV., ACRO MFG. CO.
PENN CONTROLS, INC.

CONTROLS, COMBUSTION, LINE OR LOW VOLTAGE

PENN CONTROLS, INC.

CONTROLS, FAN

CAM-STAT, INC., DIV. PAUL HENRY CO.
CRISE CONTROLS DIV., ACRO MFG. CO.
PENN CONTROLS, INC.

CONTROLS, LIMIT, LINE OR LOW VOLTAGE

CAM-STAT, INC., DIV. PAUL HENRY CO.
PENN CONTROLS, INC.

CONTROLS, PILOT, GAS BURNER

MODERN MATERIALS CO.

CONTROLS, THERMOSTATS, HEAT ACCELERATED OR ANTICIPATING

PENN CONTROLS, INC.

CONTROLS, THERMOSTATS, LINE OR LOW VOLTAGE

A-P CONTROLS CORP.
PENN CONTROLS, INC.

CONTROLS, THERMOSTATS, CLOCK, DAY AND NIGHT

DETROIT CONTROLS CORP.

CONTROLS, THERMOSTATS, WEATHER COMPENSATING

MINNEAPOLIS-HONEYWELL REGULATOR CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

CONTROL SYSTEMS, HEATING, VENTILATING, AND AIR CONDITIONING, ELECTRICAL

MINNEAPOLIS-HONEYWELL REGULATOR CO.

CONTROL SYSTEMS, ZONE, COMPLETE ASSEMBLY

CRISE CONTROLS DIV., ACRO MFG. CO.

COPPERS, SOLDERING

INSTO-GAS CORP.
REINER & CAMPBELL CO., INC.

DAMPERS, DRAFT, BAROMETRIC

BOSTON MACHINE WORKS CO.
FIELD CONTROL DIV., H. D. CONKEY & CO.
WALKER MFG. & SALES CORP.
WINDMASTER CORP.

DECKING, ROOF

REYNOLDS METALS CO.

DEHUMIDIFIERS, ELECTRIC PLUG-IN, FOR SMALL SPACES

MUELLER FURNACE CO., L. J.

DIFFUSERS, AIR, BASEBOARD

AIR CONTROL PRODUCTS, INC.
AUER REGISTER CO.
BRANDES CO.
CARNES CO., W. R.
CHAR-GALE MFG. CO.
GENERAL AUTOMATIC PRODUCTS CORP.
LIMA REGISTER CO.
HART & COOLEY MFG. CO.
PATCO MFG. CO.
ROCK ISLAND REGISTER CO.
TITUS, INC.
U. S. REGISTER CO.

DIFFUSERS, AIR, CEILING

AIR CONTROL PRODUCTS, INC.
AIR DEVICES, INC.
ANEMOSTAT CORP. OF AMERICA
BARBER-COLMAN CO.
CHAR-GALE MFG. CO.
COLEMAN CO., INC.
HART & COOLEY MFG. CO.
LIMA REGISTER CO.
U. S. REGISTER CO.

DIFFUSERS, AIR, FLOOR

A & A REGISTER CO.
A-J MFG. CO.
AIR CONTROL PRODUCTS, INC.
AUER REGISTER CO.
CHAR-GALE MFG. CO.
HART & COOLEY MFG. CO.
LIMA REGISTER CO.
ROCK ISLAND REGISTER CO.
STANDARD STAMPING & PERFORATING CO.
U. S. REGISTER CO.

DIFFUSERS, AIR, WALL

A-J MFG. CO.
AIR CONTROL PRODUCTS, INC.
AUER REGISTER CO.
BARBER-COLMAN CO.
CHAR-GALE MFG. CO.
GENERAL AUTOMATIC PRODUCTS CORP.
GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
HART & COOLEY MFG. CO.
ROCK ISLAND REGISTER CO.
U. S. REGISTER CO.

DRAFT BOOSTERS, MECHANICAL

QUICKDRAFT CO., DIV. HALL'S SAFE CO., INC.

DUCT AND DUCT FITTINGS, PREFABRICATED, METAL

ADELTA MFG. CO.
AJAX FURNACE FITTING CO., DIV. CINCINNATI SHEET METAL & ROOFING CO.
CHAMPION FURNACE PIPE CO.
CHAR-GALE MFG. CO.
CLAYTON & LAMBERT MFG. CO., LOUISVILLE DIV.
COLEMAN CO., INC.
CORBMAN BROS., INC.
EXCELSIOR STEEL FURNACE CO.
GRAY METAL PRODUCTS, INC.
HENRY FURNACE CO.
JETTRONAIRE, INC.
RALPH MFG. CO., INC.
SWETT BROS.
THOR METAL PRODUCTS CO., INC.

DUCT AND DUCT FITTINGS, PREFABRICATED, NON-METALLIC

SONOCO PRODUCTS CO., CONSTRUCTION PRODUCTS DIV.

DUCT FITTING ACCESSORIES, BLOW PIPE

KIRK & BLUM MFG. CO.

DUCT FITTING ACCESSORIES, CONDUCTOR

DIECKMANN CO., FERDINAND
RIVAL STRAP CORP.
THOR METAL PRODUCTS CO., INC.

DUCT FITTING ACCESSORIES, FURNACE PIPE

ADELTA MFG. CO.
CHAMPION FURNACE PIPE CO.
CHAR-GALE MFG. CO.
CLAYTON & LAMBERT MFG. CO., LOUISVILLE DIV.
CORBMAN BROS., INC.
GRAY METAL PRODUCTS, INC.
HENRY FURNACE CO.
JETTRONAIRE, INC.
JUNIPER ELBOW CO., INC.
MEYER & BRO. CO., F.
OHIO VALLEY HARDWARE & ROOFING CO., METAL MFG. DIV.
RALPH MFG. CO., INC.
THOR METAL PRODUCTS CO., INC.

FACES, RETURN AIR, METAL

CHAR-GALE MFG. CO.
HART & COOLEY MFG. CO.
ROCK ISLAND REGISTER CO.
U. S. REGISTER CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

FANS, PROPELLER TYPE, BOOSTER, COLD AIR RETURN

McLARTY SYSTEMS

FANS, PROPELLER TYPE, BOOSTER, ONE-PIPE WARM AIR

McLARTY SYSTEMS

FANS, PROPELLER TYPE, EXHAUSTERS

ALLEN VENTILATOR DIV., PRODUCTION PLANNING CO.
CLARAGE FAN CO.
PEERLESS ELECTRIC CO.

FANS, PROPELLER TYPE, FURNACE

CORLETT-TURNER CO.

FANS, PROPELLER TYPE, KITCHEN EXHAUST

McLARTY SYSTEMS

FANS, PROPELLER TYPE, VENTILATING SYSTEM

CLARAGE FAN CO.

FILTERS, AIR, CLEANABLE

AIR FILTER CORP.
ALUMINUM WOOL DIV., CAREY ELECTRONIC ENGINEERING CO.
AMERICAN AIR FILTER CO., INC.

FILTERS, AIR, GREASE, FOR RANGE HOODS

AIR FILTER CORP.

FILTERS, AIR, THROWAWAY

AMERICAN AIR FILTER CO., INC.
GLASFLOSS

FILTERS, FUEL OIL

A-P CONTROLS CORP.
GENERAL FILTERS, INC.
MORSE-SMITH-MORSE CO., THE

FLASHINGS, ROOF, PREFABRICATED

CHASE BRASS & COPPER CO., INC.
REVERE COPPER AND BRASS, INC.

FLASHINGS, THROUGH-WALL, PREFABRICATED

HUSSEY & CO., C. G.
REVERE COPPER AND BRASS, INC.

FLUX, ACID

RUBY CHEMICAL CO.

FLUX, ALUMINUM

ALLEN CO., INC., L. B.

FLUX, BRASS

ALLEN CO., INC., L. B.

FLUX, CAST IRON

ALLEN CO., INC., L. B.

FLUX, COPPER

ALLEN CO., INC., L. B.
RUBY CHEMICAL CO.

FLUX, GALVANIZED STEEL

ALLEN CO., INC., L. B.
RUBY CHEMICAL CO.
TINIT MFG. CO., INC.

FLUX, INCONEL

ALLEN CO., INC., L. B.

FLUX, LEAD-TIN

ALLEN CO., INC., L. B.
RUBY CHEMICAL CO.
TINIT MFG. CO., INC.

FLUX, MONEL

ALLEN CO., INC., L. B.
RUBY CHEMICAL CO.

FLUX, NICKEL

ALLEN CO., INC., L. B.

FLUX, ROSIN

ALLEN CO., INC., L. B.
RUBY CHEMICAL CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

FLUX, SILVER

ALLEN CO., INC., L. B.
LAKE CHEMICAL CO.

FLUX, STAINLESS STEEL

ALLEN CO., INC., L. B.
LAKE CHEMICAL CO.
RUBY CHEMICAL CO.

FLUX, WELDING

ALLEN CO., INC., L. B.

FLUX, ZINC

ALLEN CO., INC., L. B.

FRAMES, CHIMNEY

RIVAL STRAP CORP.

FURNACES

ARMSTRONG FURNACE CO. (General)

FURNACES, FORCED WARM AIR, COUNTERFLOW, GAS FIRED, STEEL

ADVANCE FURNACE CO.
FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
MAJESTIC CO., INC.
MUELLER FURNACE CO., L. J.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
RHEEM MFG. CO.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
ROYAL JET, INC.
SEQUOIA MFG. CO.
SUNBEAM AIR CONDITIONER DIV., AMERICAN RADIATOR & STANDARD SANITARY CORP.

FURNACES, FORCED WARM AIR, COUNTERFLOW, OIL FIRED, STEEL

BESSER METAL PRODUCTS CORP.
COX MFG. CO.
GENERAL AUTOMATIC PRODUCTS CORP.
GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
MAJESTIC CO., INC.
MUELLER FURNACE CO., L. J.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
SUNBEAM AIR CONDITIONER DIV., AMERICAN RADIATOR & STANDARD SANITARY CORP.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, HIGHBOY, COAL FIRED, STEEL

HALL-NEAL FURNACE CO.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, CAST IRON

GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL

ADVANCE FURNACE CO.
AIRTEMP DIV., CHRYSLER CORP.
COLEMAN CO., INC.
DELCO APPLIANCE DIV., GENERAL MOTORS CORP.
FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
HALL-NEAL FURNACE CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
JETTRONAIRE, INC.
MAJESTIC CO., INC.
MAYFLOWER AIR CONDITIONERS, INC.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
PERFECTION STOVE CO.
RHEEM MFG. CO.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
ROYAL JET, INC.
SUNBEAM AIR CONDITIONER DIV., AMERICAN RADIATOR & STANDARD SANITARY CORP.
SURFACE COMBUSTION CORP.
SYNCROMATIC CORP.
THATCHER FURNACE CO.
ZINK CO., JOHN

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, STEEL

AIRTEMP DIV., CHRYSLER CORP.
BESSER METAL PRODUCTS CORP.
COX MFG. CO.
GENERAL AUTOMATIC PRODUCTS CORP.
GILBERT & BARKER MFG. CO.
HALL-NEAL FURNACE CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
JETTRONAIRE, INC.
MAJESTIC CO., INC.
MAYFLOWER AIR CONDITIONERS, INC.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
SUNBEAM AIR CONDITIONER DIV., AMERICAN RADIATOR & STANDARD SANITARY CORP.
SYNCROMATIC CORP.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL
For Close Clearance (2 in. or under) Installations

RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, STEEL
For Close Clearance (2 in. or under) Installations

RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL
For Zero Clearance Installations

RHEEM MFG. CO.
SEQUOIA MFG. CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

FURNACES, FORCED WARM AIR, HORIZONTAL, GAS FIRED, STEEL

COLEMAN CO., INC.
COX MFG. CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
MAJESTIC CO., INC.
OLSEN MFG. CO., THE C. A.
RHEEM MFG. CO.
SEQUOIA MFG. CO.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, HORIZONTAL, OIL FIRED, STEEL

BESSER METAL PRODUCTS CORP.
COX MFG. CO.
DELTA HEATING CORP.
GENERAL AUTOMATIC PRODUCTS CORP.
GILBERT & BARKER MFG. CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
MAJESTIC CO., INC.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
QUIET AUTOMATIC BURNER CORP.
THATCHER FURNACE CO.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, LOWBOY, COAL FIRED, CAST IRON

FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.

FURNACES, FORCED WARM AIR, LOWBOY, COAL FIRED, STEEL

HALL-NEAL FURNACE CO.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.
SYNCROMATIC CORP.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, LOWBOY, GAS FIRED, CAST IRON

FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.

FURNACES, FORCED WARM AIR, LOWBOY, GAS FIRED, STEEL

AIRTEMP DIV., CHRYSLER CORP.
FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
HALL-NEAL FURNACE CO.
HEIL CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
JETTRONAIRE, INC.
MAJESTIC CO., INC.
MAYFLOWER AIR CONDITIONERS, INC.
OLSEN MFG. CO., THE C. A.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
SUPERIOR FURNACE & MFG. CO.
SYNCROMATIC CORP.
WATERMAN-WATERBURY CO.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.
WILLIAMSON HEATER CO.
ZINK CO., JOHN

FURNACES, FORCED WARM AIR, LOWBOY, OIL FIRED, STEEL

AIRTEMP DIV., CHRYSLER CORP.
BESSER METAL PRODUCTS CORP.
COX MFG. CO.
GENERAL AUTOMATIC PRODUCTS CORP.
GILBERT & BARKER MFG. CO.
HALL-NEAL FURNACE CO.
HEIL CO.
HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
JETTRONAIRE, INC.
MAJESTIC CO., INC.
MAYFLOWER AIR CONDITIONERS, INC.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.
RHEEM MFG. CO.
SUPERIOR FURNACE & MFG. CO.
SYNCROMATIC CORP.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.
WILLIAMSON HEATER CO.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, COAL FIRED, STEEL

SYNCROMATIC CORP.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, GAS FIRED, STEEL

SYNCROMATIC CORP.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, OIL FIRED, STEEL

BESSER METAL PRODUCTS CORP.
SYNCROMATIC CORP.

FURNACES, SOLDERING

INSTO-GAS CORP.
TURNER BRASS WORKS

FURNACES, WARM AIR, GRAVITY, COAL FIRED, CAST IRON

FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.

FURNACES, WARM AIR, GRAVITY, COAL FIRED, STEEL

HALL-NEAL FURNACE CO.
HENRY FURNACE CO.
OLSEN MFG. CO., THE C. A.
WILLIAMSON HEATER CO.

FURNACES, WARM AIR, GRAVITY, FLOOR, GAS

ADVANCE FURNACE CO.
RHEEM MFG. CO.
ZINK CO., JOHN

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

CLARK 53

FURNACES, WARM AIR, GRAVITY, GAS FIRED, CAST IRON

HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
OLSEN MFG. CO., THE C. A.

FURNACES, WARM AIR, GRAVITY, GAS FIRED, STEEL

HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
OLSEN MFG. CO., THE C. A.
RHEEM MFG. CO.
RICHMOND RADIATOR CO., AFFIL. REYNOLDS METALS CO.
WILLIAMSON HEATER CO.

FURNACES, WARM AIR, GRAVITY, OIL FIRED, STEEL

HENRY FURNACE CO.
INTERNATIONAL HEATER CO.
OLSEN MFG. CO., THE C. A.
PATTEN CO., J. V.

FURNACES, WARM AIR, GRAVITY, WALL

ADVANCE FURNACE CO. (Gas)
DELTA HEATING CORP. (Oil)
HAMMEL RADIATOR ENGINEERING CO. (Gas)
RHEEM MFG. CO. (Gas)
ZINK CO., JOHN (Gas)

GAUGES, TANK, FUEL OIL

KRUEGER SENTRY GAUGE CO.
MORSE-SMITH-MORSE CO., THE
OIL EQUIPMENT MFG. CORP.
SCULLY SIGNAL CO.

GEARING, SKYLIGHT

RIVAL STRAP CORP.

GRILLES, HEATING, VENTILATING AND AIR CONDITIONING

A-J MFG. CO.
AIR CONTROL PRODUCTS, INC.
AUER REGISTER CO.
HART & COOLEY MFG. CO.
INDEPENDENT REGISTER CO.
ROCK ISLAND REGISTER CO.
U. S. REGISTER CO.

GUARDS, SNOW

RIVAL STRAP CORP.

GUNS, RIVET

REMINGTON ARMS CO., INC.

GUTTER ACCESSORIES

BERGER BROS. CO.
CHAR-GALE MFG. CO.
CINCINNATI ELBOW CO.
INLAND STEEL PRODUCTS CO
MELAWAY CORP.

GUTTERS

BERGER BROS. CO.
CHAR-GALE MFG. CO.
INLAND STEEL PRODUCTS CO.
OBDYKE, INC., BENJAMIN P.

HARDWARE, FOR CABINETS AND CASINGS

NATIONAL LOCK CO. (DOOR HANDLES, CATCHES AND STRIKES)

HARDWARE, DUCT FITTING

DURO-DYNE CORP.

HEATERS, DOMESTIC WATER, STORAGE TYPE, GAS FIRED (ALSO LP GAS)

RHEEM MFG. CO.
WOOD CO., JOHN, HEATER & TANK DIV.

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, SUSPENDED INSTALLATION, GAS FIRED

HENRY FURNACE CO.
MODINE MFG. CO.
MUELLER FURNACE CO., L. J.
OLSEN MFG. CO., THE C. A.
REZNOR MFG. CO.

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, SUSPENDED, OIL FIRED

DELTA HEATING CORP.

HEATING EQUIPMENT WHOLESALERS

BRAUER SUPPLY CO., A. G.
FAMOUS FURNACE CO.

HOUSINGS, BLOWER AND FAN

CLARAGE FAN CO.

HUMIDIFIERS, FURNACE, AUTOMATIC, EVAPORATIVE

AUTOMATIC HUMIDIFIER CO.
CHAR-GALE MFG. CO.
CLEVELAND HUMIDIFIER CO.
SKUTTLE MFG. CO.
VIKING AIR CONDITIONING DIV., NATIONAL RADIATOR CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

HUMIDIFIERS, FURNACE, AUTOMATIC, SPRAY

MAID-O'-MIST, INC.
WALTON LABORATORIES, INC.

INCINERATORS

HENRY FURNACE CO.
MAJESTIC CO., INC.
MUELLER FURNACE CO., L. J.
OLSEN MFG. CO., THE C. A.
SCHWAB FURNACE CO.

INSULATION, DUCT

GUSTIN-BACON MFG. CO.

LOUVERS AND SHUTTERS, AUTOMATICALLY OR MANUALLY CONTROLLED

ELGO SHUTTER & MFG. CO.
SWARTWOUT CO.

MACHINERY EQUIPMENT DISTRIBUTORS

CENTRAL WEST MACHINERY CO.
MILTON EQUIPMENT CO.

MACHINERY, SHEET METAL, REBUILT AND USED

MILTON EQUIPMENT CO.

MACHINES, SHEET METAL WORKING, BAR FOLDING, HAND

PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, BEADING, HAND

NIAGARA MACHINE & TOOL WORKS

MACHINES, SHEET METAL WORKING, BEADING, POWER

PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, BENDERS

O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, BRAKES, HAND

DREIS & KRUMP MFG. CO.
O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, BRAKES, PORTABLE

DREIS & KRUMP MFG. CO.
HALLMOR, INC.
STUECK, INC., W. WHITNEY
VYKE BRAKE CO.

MACHINES, SHEET METAL WORKING, BRAKES, POWER

DREIS & KRUMP MFG. CO.

MACHINES, SHEET METAL WORKING, BRAKES, PRESS (AND DIES)

DREIS & KRUMP MFG. CO.

MACHINES, SHEET METAL WORKING, BURRING, HAND

NIAGARA MACHINE & TOOL WORKS

MACHINES, SHEET METAL WORKING, CRIMPING, HAND

NIAGARA MACHINE & TOOL WORKS
PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, FLANGING, HAND

NIAGARA MACHINE & TOOL WORKS
SMITH, R. E.

MACHINES, SHEET METAL WORKING, GROOVING, POWER

PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, LOCK FORMING, POWER

LOCKFORMER CO.

MACHINES, SHEET METAL WORKING, NIBBLING, POWER

WALES-STRIPPIT CORP.

MACHINES, SHEET METAL WORKING, NOTCHING, HAND

O'NEIL-IRWIN MFG. CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

MACHINES, SHEET METAL WORKING, PITTSBURGH LOCK OPENING

BIRKS MFG. CO.

MACHINES, SHEET METAL WORKING, PRESSES & DIES

DREIS & KRUMP MFG. CO.
FALLSINGTON MFG. CO.
O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, PUNCHES, POWER

O'NEIL-IRWIN MFG. CO.
WALES-STRIPPIT CORP.

MACHINES, SHEET METAL WORKING, ROD CUTTING

BEVERLY SHEAR MFG. CO., THE
O'NEIL-IRWIN MFG. CO.
REINER & CAMPBELL CO., INC.

MACHINES, SHEET METAL WORKING, ROLL FORMING, HAND

PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, SAWS, BAND, SHEET METAL CUTTING

BETT-MARR MFG. CO.

MACHINES, SHEET METAL WORKING, SEAMING, HAND

NIAGARA MACHINE & TOOL WORKS
PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, SHEARS, CIRCLE, HAND

BEVERLY SHEAR MFG. CO., THE

MACHINES, SHEET METAL WORKING, SHEARS, CIRCLE, POWER

LIBERT MACHINE CO.

MACHINES, SHEET METAL WORKING, SHEARS, ELECTRIC, PORTABLE

O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, SHEARS, ROTARY, SLITTING, POWER

MARSHALLTOWN MFG. CO.

MACHINES, SHEET METAL WORKING, SHEARS, SQUARING, FOOT

PECK, STOW & WILCOX CO.

MACHINES, SHEET METAL WORKING, SHEARS, SQUARING, POWER

CINCINNATI SHAPER CO.
O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, SLIP ROLL FORMING, HAND

O'NEIL-IRWIN MFG. CO.

MACHINES, SHEET METAL WORKING, SLIP ROLL FORMING, POWER

SAN ANGELO FOUNDRY & MACHINE CO.

MACHINES, SHEET METAL WORKING, SLITTING, HAND

BEVERLY SHEAR MFG. CO., THE
NIAGARA MACHINE & TOOL WORKS
WHITNEY MFG. CO., W. A.

MACHINES, SHEET METAL WORKING, WIRING, HAND

NIAGARA MACHINE & TOOL WORKS

METALS, PERFORATED, SHEET AND PLATE

DIAMOND MFG. CO.

METERS, AIR VELOCITY, DIRECT READING

BACHARACH INDUSTRIAL INSTRUMENT CO.

MOTORS, ELECTRIC, FRACTIONAL HP

CENTURY ELECTRIC CO.
DELCO PRODUCTS DIV., GENERAL MOTORS CORP.
EMERSON ELECTRIC MFG. CO.
PACKARD ELECTRIC DIV., GENERAL MOTORS CORP.
REDMOND DISTRIBUTORS, INC.

MOTORS, ELECTRIC, 1 H.P. AND OVER

CENTURY ELECTRIC CO.
DELCO PRODUCTS DIV., GENERAL MOTORS CORP.
EMERSON ELECTRIC MFG. CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

NAILS, HARDENED MASONRY

PARKER-KALON DIV., GENERAL AMERICAN TRANSPORTATION CORP.

NAILS, SCREW HARDENED

PARKER-KALON DIV., GENERAL AMERICAN TRANSPORTATION CORP.

OIL BURNER PARTS

A-P CONTROLS CORP. (Oil lifters and flow controls)
NU-WAY CORP., THE (Nozzle and electrode assembly)
OIL EQUIPMENT MFG. CORP. (Fill boxes, tank bushings, vent caps)

PAINT, SHEET METAL

ILLINOIS BRONZE POWDER CO., INC.
THOMPSON & CO.

PANELS, PLASTIC, TRANSLUCENT MATERIAL

CHEMOLD CO.

PIPE AND FITTINGS, CONDUCTOR

BERGER BROS. CO.

PIPE AND FITTINGS, GAS VENT AND FLUE

VAN-PACKER CORP.

PIPE AND FITTINGS, SMOKE

CHAMPION FURNACE PIPE CO.
CHAR-GALE MFG. CO.
GRAY METAL PRODUCTS, INC.
RALPH MFG. CO., INC.
WILLIAMSON HEATER CO.

PUMPS, FUEL, OIL BURNER

SUNDSTRAND MACHINE TOOL CO., HYDRAULIC DIV.

PUMPS, RECIRCULATING, EVAPORATIVE COOLER

LITTLE GIANT VAPORIZER CO.

PUNCHES, BENCH

THOR TOOL & DIE CO.
WHITNEY MFG. CO., W. A.

PUNCHES, COMBINATION HAND AND BENCH

WHITNEY MFG. CO., W. A.

PUNCHES, HAND

REINER & CAMPBELL CO., INC.
WHITNEY METAL TOOL CO.
WHITNEY MFG. CO., W. A.

REELS, SHEET METAL WINDING

DAHLSTROM MACHINE WORKS

REGISTERS, HEATING, VENTILATING AND AIR CONDITIONING

A & A REGISTER CO.
A-J MFG. CO.
AIR CONTROL PRODUCTS, INC.
AUER REGISTER CO.
CHAR-GALE MFG. CO.
GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
HART & COOLEY MFG. CO.
INDEPENDENT REGISTER CO.
ROCK ISLAND REGISTER CO.
STANDARD STAMPING & PERFORATING CO.
U. S. REGISTER CO.

REGULATORS, DUCT DAMPER SETS

GERETT CORP., M. A.

REPAIRS, STOVE AND FURNACE

ADAMS CO., THE
BRAUER SUPPLY CO., A. G.
LIVINGSTON, INC.

ROD, WELDING

AMERICAN BRASS CO.

ROOFING, SHEET METAL, COPPER

REVERE COPPER AND BRASS, INC.

SCREWS, SHEET METAL

NATIONAL LOCK CO.
PARKER-KALON DIV., GENERAL AMERICAN TRANSPORTATION CORP.

SHEETS, METAL, SPECIAL METAL

AMERICAN BRASS CO.

SHEETS, METAL, ALUMINUM

CHAR-GALE MFG. CO.

SHEETS, METAL, COPPER

REVERE COPPER AND BRASS, INC.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

SHEETS, METAL, STEEL, COPPER BEARING, GALVANIZED

CONTINENTAL STEEL CORP.

SHEETS, METAL, STEEL, GALVANIZED

BETHLEHEM STEEL CO.
CONTINENTAL STEEL CORP.
RYERSON & SON, INC., JOSEPH T.
U. S. STEEL CO., SUB. U. S. STEEL CORP.
WHEELING CORRUGATING CO.

SHEETS, METAL, STEEL GALVANNEALED

CONTINENTAL STEEL CORP.

SHEETS, METAL, STEEL, STAINLESS

CRUCIBLE STEEL CO.
REPUBLIC STEEL CORP.
WASHINGTON STEEL CORP.
WOLFF AND CO., BENJAMIN

SKYLIGHTS

WILLIS STEEL CORP.

SNIPS AND SHEARS, BENCH AND HAND

BEVERLY SHEAR MFG. CO., THE
PECK, STOW & WILCOX CO.

SOLDER, ALUMINUM

ALLEN CO., INC., L. B.

STAMPINGS, METAL

DURO-DYNE CORP.

STAMPINGS, STEEL FURNACE

MILLER & DOING

SYSTEMS, HEATING, SMALL PIPE

CHAR-GALE MFG. CO.
COLEMAN CO., INC.
CORBMAN BROS., INC.
HENRY FURNACE CO. (Gas & oil)
WILLIAMSON HEATER CO.

TANKS, FUEL OIL, ACCESSORIES

MORSE-SMITH-MORSE CO., THE

TOOLS, ROOFERS'

FREY & CO., FRANK P.

TOOLS, SHEET METAL WORKERS'

CRESCENT TOOL CO. (Pliers, nippers and wrenches)
JOHNSON LADDER SHOE CO. (Rubber ladder shoes)
MERCHANDISING AND MFG. ASSOCIATES, INC. (Shrinkers and stretchers)
PECK, STOW & WILCOX CO. (Snips)
REINER & CAMPBELL CO., INC. (Dividers, drive cleats, notchers)
RIVAL STRAP CORP. (Portable saw gun, 3-way clamp)
WHITNEY MFG. CO., W. A. (Tinner's hammer)

TORCHES, SOLDERING

REINER & CAMPBELL CO., INC.
VELOCITY-POWER TOOL CO.

TOWERS, COOLING, MECHANICAL DRAFT

CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.

TRANSFORMERS, IGNITION

NU-WAY CORP., THE

TRUCKS, MOTOR

CHEVROLET MOTOR DIV., GENERAL MOTORS CORP.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY
Consisting of blower, filter and cooling coil

CLARAGE FAN CO.
CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY
Consisting of condensing unit, blower, filter, and cooling coil

AIRTEMP DIV., CHRYSLER CORP.
COLEMAN CO., INC.
CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.
GENERAL ELECTRIC CO., AIR CONDITIONING DIV.
INTERNATIONAL HEATER CO.
MAJESTIC CO., INC.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.
WILLIAMSON HEATER CO.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY
Consisting of cooling coil, filter and condensing unit

COLEMAN CO., INC.
CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.
FOREST CITY FOUNDRIES CO., NIAGARA FURNACE DIV.
INTERNATIONAL HEATER CO.
WILLIAMS DIV., EUREKA-WILLIAMS CORP.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER-WINTER

AMERICAN FURNACE CO. (Gas fired)
CARRIER CORP. (Gas and oil)
GENERAL ELECTRIC CO., AIR CONDITIONING DIV. (Gas and oil)
HENRY FURNACE CO. (Gas and oil)
MAJESTIC CO., INC. (Gas and oil)
MUELLER FURNACE CO., L. J. (Gas and oil)
OLSEN MFG. CO., THE C. A. (Gas and oil)
SUPERIOR FURNACE & MFG. CO. (Gas and oil)
TYPHOON AIR CONDITIONING CO., INC. (Gas and oil)

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, WINTER ONLY, FOR SPLIT SYSTEM

CLARAGE FAN CO.
CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.

UNITS, AIR CONDITIONING, CENTRAL SYSTEM, EVAPORATIVE TYPE

ALTON MFG. CO.
NATIONAL ENGINEERING & MFG. CO.

UNITS, AIR CONDITIONING, ROOM TYPE, EVAPORATIVE

ALTON MFG. CO.
NATIONAL ENGINEERING & MFG. CO.
PALMER MFG. CORP.

UNITS, AIR CONDITIONING, ROOM TYPE, WINDOW, SUMMER

CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.
FRESH'ND-AIRE CO.
RHEEM MFG. CO.

UNITS, AIR CONDITIONING, ROOM TYPE, WINDOW, SUMMER-WINTER

FRESH'ND-AIRE CO.

UNITS, AIR CONDITIONING, STORE TYPE, FLOOR CABINET, SUMMER ONLY, 3 HP AND OVER

CURTIS REFRIGERATING MACHINE DIV., CURTIS MFG. CO.

UNITS, AIR CONDITIONING, SUSPENDED CABINET, SUMMER ONLY, 3 HP AND OVER

BESSER METAL PRODUCTS CORP.

VALVES, GAS PRESSURE REGULATING

MAXITROL CO.
THERMAC CO.

VALVES, HUMIDIFIER, WATER LEVEL

MOREY, DAN

VALVES, SOLENOID

PENN CONTROLS, INC.

VANES, DUCT TURNING

DURO-DYNE CORP.
ELGEN MFG. CORP.

VENTILATORS, ROOF, FAN

ALLEN VENTILATOR DIV., PRODUCTION PLANNING CO.
PENN VENTILATOR CO.
SWARTWOUT CO.

VENTILATORS, ROOF, GRAVITY

ACCURATE SHEET METAL & MFG. WKS.
GREENHECK BROS. MFG. CO.
PENN VENTILATOR CO.
SWARTWOUT CO.

WASHERS, AIR, HEATING AND VENTILATING

CLARAGE FAN CO.

WHEELS, BLOWER

CLARAGE FAN CO.

For the page on which you will find the advertising of manufacturers in this issue, see the Index to Advertisers on the last two pages of this yellow Directory Section

NAMES AND ADDRESSES OF NATIONAL ENGINEERING SOCIETIES, ASSOCIATIONS, ETC.

Acoustical Society of America, 205 W. Monroe St., Chicago 6, Ill.

Air-Conditioning and Refrigeration Institute, 1346 Connecticut Ave., N. W., Washington 6, D. C.

Air Distribution Institute, 2130 Keith Bldg., Cleveland 14, Ohio.

Air Filter Institute, 5200 Harvard Ave., Cleveland 5, Ohio.

Air Pollution Control Association, 4400 Fifth Ave., Mellon Institute Building, Pittsburgh, Pa.

Aluminum Association, 420 Lexington Ave., New York 17, N. Y.

American Foundrymen's Association, 616 S. Michigan Ave., Chicago, Ill.

American Gas Association, 420 Lexington Ave., New York 17, N. Y.

American Industrial Hygiene Association, 4400 Fifth Ave., Pittsburgh 13, Pa.

American Institute of Architects, 1741 New York Ave., Washington, D. C.

American Institute of Electrical Engineers, 33 W. 39th St., New York 18, N. Y.

American Institute of Wholesale Plumbing & Heating Supply Associations, Inc, 402 Albee Bldg., Washington, D. C.

American Iron and Steel Institute, 350 Fifth Ave., New York 1, N. Y.

American Society for Testing Materials, 1916 Race St., Philadelphia, Pa.

American Society of Heating and Ventilating Engineers, 62 Worth St., New York 13, N. Y.

American Society of Heating and Ventilating Engineers, Research Laboratory, 7218 Euclid Ave., Cleveland 3, Ohio.

American Society of Mechanical Engineers, 29 W. 39th St., New York 18, N. Y.

American Society of Refrigerating Engineers, 40 W. 40th St., New York 18, N. Y.

American Standards Association, 70 E. 45th St., New York, N. Y.

American Welding Society, 33 W. 39th St., New York 18, N. Y.

American Zinc Institute, Inc., 60 E. 42nd St., New York 17, N. Y.

Anthracite Institute, 101 Park Ave, New York 17, N. Y.

Anthracite Industries Laboratory, 237 Old River Rd., Wilkes Barre, Pa.

Bituminous Coal Institute, Southern Bldg., Washington 5, D. C.

Bituminous Coal Research, Inc., 2609 First National Bank Bldg., Pittsburgh 22, Pa.

Building Research Advisory Board, National Academy of Sciences, National Research Council, Washington 25, D. C.

Cooling Tower Institute, 444 Emerson St., Palo Alto, Calif.

Copper and Brass Research Association, 420 Lexington Ave., New York 17, N. Y.

Gas Appliance Manufacturers' Association, 60 E. 42nd St., New York 17, N. Y.

Humidifier Association, 2300 Payne Ave., Cleveland 14, Ohio.

Independent Insulating Contractors National Association, Room 210, Shoreham Bldg., Washington 5, D. C.

National Association of Fan Manufacturers, 2159 Guardian Bldg., Detroit 26, Mich.

National Association of Practical Refrigerating Engineers, 435 N. Waller Ave., Chicago, Ill.

National Association of Sheet Metal Distributors, 505 Arch St., Philadelphia, 3, Pa.

National Board of Fire Underwriters, 85 John St., New York, N. Y.

National Bureau of Standards, Washington 25, D. C.

National Coal Association, Southern Bldg., 15th and H Sts., N. W., Washington 5, D. C.

National Electrical Manufacturers Association, 155 E. 44th St., New York 17, N. Y.

National Fire Protection Association, 60 Batterymarch St., Boston, Mass.

National Heating Wholesalers Association, Suite 921, 228 N. LaSalle St., Chicago 1, Ill.

National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

National Warm Air Heating and Air Conditioning Association, 145 Public Square, Cleveland 14, Ohio.

National Warm Air Heating and Air Conditioning Association, Canadian Chapter, Yonge at Deloraine, Toronto 12, Ontario, Canada.

Oil-Heat Institute of America, 500 Fifth Ave., New York 36, N. Y.

Power Fan Manufacturers' Association, 2159 Guardian Bldg., Detroit 26, Mich.

Refrigeration and Air Conditioning Contractors Association, Inc., 2108 Keith Bldg., 1621 Euclid Ave., Cleveland 15, Ohio.

Refrigeration Equipment Wholesalers Association, 2607 N. High St., Columbus, Ohio.

Refrigeration Industry Safety Advisory Committee, 155 E. 44th St., New York 17, N. Y.

Refrigeration Service Engineers Society, 433 N. Waller Ave., Chicago 44, Ill.

Refrigeration Trade Association of America, 3531 14th St., N. W., Washington 10, D. C.

Sheet Metal Contractors National Association, 170 Division St., Elgin, Ill.

Stoker Manufacturers Association, 307 N. Michigan Ave., Chicago 1, Ill.

Underwriters' Laboratories, 207 E. Ohio St., Chicago, Ill.

Section of

American Artisan

1954 Directory of Warm Air Heating, Residential AIR CONDITIONING AND SHEET METAL PRODUCTS

[Part 2 — ALL PRODUCTS CLASSIFIED]

ADSORBERS, ODOR

Abbeon Supply Co., Jamaica, N. Y.
Aerotrol Engineering Corp., Pittsburgh, Pa.
Barnebey-Cheney Co., Pur Air Div., Columbus, O.
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Connor Engineering Corp., Danbury, Conn.
Research Products Corp., Madison, Wis.

AIR CONDITIONING UNITS

See Units, Air Conditioning

AIR DIFFUSERS

See Diffusers, Air

AIR FILTERS

See Filters, Air

AIR FRESHENING APPARATUS

Boyle-Midway, Inc., New York, N. Y.
Electroaire Corp., Long Island City, N. Y.

AIR METERS

See Meters, Air; Anemometers

AIR, PURIFICATION

See Adsorbers, Odor

AIR STERILIZERS

Air Purification Service, Inc., New York, N. Y.
Germatrol Corp., Pittsburgh, Pa.
Hanovia Chemical & Mfg. Co., Newark, N. J.
Health Trola Div., Excel Heating & Air Conditioning Co., Chicago, Ill.
Iron City Chemical Co., Glycolator Div., Valencia, Pa.
National Air Conditioning, Inc., Johnstown, Pa.

AIR WASHERS

See Washers, Air

ALUMINUM COATED SHEETS

See Sheets, Metal, Steel, Aluminum Coated

ALUMINUM PIPE

See Tubing, Aluminum

ALUMINUM SHEETS

See Sheets, Metal, Aluminum

ANALYZERS, CO_2, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Defender Instrument & Regulator Co., St. Louis, Mo.
Dwyer Mfg. Co., F. W., Chicago, Ill.
Ellison Draft Gage Co., Chicago, Ill.
Engelhard, Inc., Chas., East Newark, N. J.
General Scientific Equipment Co., Philadelphia, Pa.
Hays Corp., Michigan City, Ind.
Permutit Co., New York, N. Y.
Preferred Utilities Mfg. Corp., New York, N. Y.
Uehling Instrument Co., Paterson, N. J.
Victory Engineering Corp., Union, N. J.

ANEMOMETERS

Abbeon Supply Co., Jamaica, N. Y.
Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Detroit Air Conditioning Service Co., Detroit, Mich.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
Hastings Instrument Co., Inc., Hampton, Va.
Hill & Co., E. Vernon, Lake Geneva, Wis.
Illinois Testing Laboratories, Inc., Chicago, Ill. (Thermo-electrical)
Mine Safety Appliance Co., Pittsburgh, Pa.
Taylor Instrument Companies, Rochester, N. Y.
Willson Products, Inc., Reading, Pa.

ANGLES, BARS, BEAMS, CHANNELS AND TEES (LIGHT WEIGHT SHAPES)

Acme Steel Co., Chicago, Ill.
Alden Mfg. Co., Painesville, Ohio.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
Aluminum Co., of America, Pittsburgh, Pa.
American Brass Co., New York, N. Y.
Bethlehem Steel Co., Bethlehem, Pa.
Byers Co., A. M., Pittsburgh, Pa. (Wrought iron structural shapes)
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Angles, Channels).
Dow Chemical Co., Midland, Mich.
Harvey Machine Co., Inc., Torrance, Calif.
Inland Steel Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind. (Angles, Bars, Beams, Channels, Tees)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Laclede Steel Co., St. Louis, Mo. (Bars)
Penn Metal Co., Inc., New York, N. Y. (Channels)
Republic Steel Corp., Cleveland, Ohio.
Revere Copper & Brass Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky.
Tennessee Coal & Iron Div., U.S. Steel Corp., Fairfield, Ala.
Truscon Steel Div., Republic Steel Corp., Youngstown, Ohio.
United States Steel Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ARC WELDERS

See Welders, Arc

ARC WELDING ELECTRODES

See Rods, Welding

ASBESTOS BOARD

See Sheets, Non-Metallic

ASBESTOS PAPER

See Paper, Asbestos

ATTIC FANS

See Fans, Night Air Cooling

AUTOMATIC HUMIDIFIERS

See Humidifiers, Furnace

AWNINGS, SHEET METAL

Air Control Products, Inc., Coopersville, Mich.
Kawneer Co., Niles, Mich.
KoolVent Metal Awning Corp. of America, Pittsburgh, Pa.
Martin Stamping & Stove Co., Huntsville, Ala.
Russell Co., F. C., Cleveland, Ohio.
Wagner Awning & Mfg., Co., Cleveland, Ohio.

BAFFLES, COMBUSTION CHAMBER

Amerform Corp., Philadelphia, Pa.
Barclay, Inc., Robt., Chicago, Ill.

Boston Machine Works Co., Lynn, Mass.
Chicago Fire Brick Co., Chicago, Ill.
Coogan Co., Inc., Frank J., Pittsburgh, Pa.
Harvey, Inc., Sid, Valley Stream, N. Y.
Insulating Castable Corp., River Rouge, Mich.
Insulation & Refractories Co., Williamson, N. Y.
Iron-Hide Sales Co., Matawan, N.J.
Laclede-Christy Co. St. Louis, Mo.
Oil Equipment Mfg. Co., New Haven, Conn.
Peterson Co., B. A., Dowagiac, Mich.
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y.
Robinson Insulation Co., Great Falls, Mont.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Stark & Co., H. W., Ann Arbor, Mich.
Walsh Refractories Corp., St. Louis, Mo.
Zeh Co., Inc., Passaic, N.J.

BAGS, DUST RECOVERY

Burcott Mills, Chicago, Ill.
Day Co., Minneapolis, Minn.
Master-Craft Supply Co., Inc., Haverstraw, N. Y.
Raybestos-Manhattan, Inc., Manheim, Pa.
Wagner Awning & Mfg. Co., Cleveland, Ohio.

BALANCING EQUIPMENT, FAN

Bear Mfg. Co., Rock Island, Ill.
Gisholt Machine Co., Madison, Wis.
Sundstrand Machine Tool Co., Rockford, Ill.

BAND SAWS

See Machines, Saws, Band

BAR FOLDERS

See Machines, Bar Folding

BAROMETRIC DRAFT DAMPERS

See Dampers, Draft, Barometric; Draft Diverters

BARS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BASE BOARD REGISTERS

See Diffusers, Air, Baseboard

BASES AND PADS, VIBRATION ISOLATING

Barry Corp., Watertown, Mass.
Buffalo Forge Co., Buffalo, N. Y.
Celotex Corp., Chicago, Ill.
Clarage Fan Co., Kalamazoo, Mich.
Cork Insulation Co., Inc., New York, N. Y.
Division Lead Co., Chicago, Ill.
Felters Co., Inc., Boston, Mass.
Firestone Industries Products Co., Akron, O.
Goodrich Co., B. F., Akron, Ohio.
Hobsite Products Co., Inc., Harrison, N. J.
Johns-Manville, New York, N. Y.
Korfund Co., Inc., Long Island City, N. Y.
Lord Mfg. Co., Erie, Pa.
MB Mfg. Co., Inc., New Haven, Conn.
Mundet Cork Corp., Brooklyn, N. Y.
National Cork Co., Englewood, N. J.
National Lead Co., New York, N. Y.
Raybestos-Manhattan, Inc., Passaic, N. J.
Robinson Aviation, Inc., Teterboro, N.J.
Sponge Rubber Products Co., Shelton, Conn.
United Cork Cos., Kearny, N. J.
United States Rubber Co., New York, N. Y.
Vibration Eliminator Co., Long Island City, N. Y.
Wagner Awning & Mfg. Co., Cleveland, Ohio.
Western Felt Works, Chicago, Ill. (Felt).

BATHS, TINNING

Division Lead Co., Summit, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Farrelloy Co., Philadelphia, Pa.

BEADERS

See Machines, Beading

BEAMS

See Angles, Bars, Beams, Channels, and Tees (Light weight shapes)

BEARINGS, PILLOW BLOCK

Ahlberg Bearing Co., Chicago, Ill.
Air Controls, Inc., Cleveland, Ohio.
Anti-Friction Bearings Co., Los Angeles, Calif.
Chain Belt Co., Milwaukee, Wis.
Chicago Die Casting Co., Chicago, Ill.
Congress Drives Div., Tann Corp., Detroit, Mich.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Fafnir Bearing Co., The, New Britain, Conn.
Freed Products Co., Moline, Ill.
Golden's Foundry & Machine Co., Columbus, Ga.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Link-Belt Co., Chicago, Ill.
Norma-Hoffmann Bearing Corp., Stamford, Conn.
Plymouth Industries, Inc., Plymouth, Ind.
Randall Graphite Bearings, Inc., Chicago, Ill.
Royersford Foundry & Machine Co., Royersford, Pa.
Seco-Lite Mfg. Co., St. Louis, Mo.
Shafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
SKF Industries, Inc., Philadelphia, Pa.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Triangle Mfg. Co., Oshkosh, Wis.
Vernco Corp., Columbus, Ind.
Whiteley Bearing Corp., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

BELTS, V

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Pulley Co., Philadelphia, Pa.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Belting Co., Chicago, Ill.
Congress Drives Div. Tann Corp., Detroit, Mich.
Dayton Rubber Co., Dayton, Ohio.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Firestone Industrial Products Co., Akron, O.
Gates Rubber Co., Denver, Colo.
Goodrich Co., B. F., Akron, Ohio.
Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Manheim Mfg. & Belting Co., Manheim, Pa. (Adjustable).
Maurey Mfg. Corp., Chicago, Ill.
New York Belting & Packing Co., Passaic, N. J.
Pyott Foundry & Machine Co., Chicago, Ill.
Raybestos-Manhattan, Inc., Passaic, N. J.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio.
Thermoid Co., Trenton, N. J.
United States Rubber Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.
Worthington Corp., Harrison, N. J.

BENDERS, (ANGLE, ETC.)

See Machines, Benders

BLADES, PROPELLER FAN

Ackermann Mfg. Co., Wheeling, W. Va.
Aerovent Fan Co., Piqua, Ohio.
Air Controls, Inc., Cleveland, Ohio.
Airmaster Corp., Chicago, Ill.
Beckett & Co., Thomas, Dallas, Texas.
Bern's Mfg. Co., Chicago, Ill.
Burden Co., Alan E., Los Angeles, Calif.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Irvington, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Dallas Engineering Co., Inc., Dallas, Texas.
Dana Fan & Blower Corp., Cincinnati, Ohio
Dayton Rubber Co., Dayton, O.
Dual-Air Fan Corp., South Elgin, Ill.
Dynamic Air Engineering, Inc., Los Angeles, Calif.
Electrovent Fan & Mfg. Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Martin Fan & Blower Co., Chicago, Ill.
Meier Electric & Machine Co., Indianapolis, Ind.
Myers Electric Co., Pittsburgh, Pa.
National Gas Equipment Co., Inc., Terrell, Texas.
Revcor, Carpentersville, Ill.
Peerless Electric Co., Warren, Ohio.
South Bend Air Products, Inc., South Bend, Ind.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Thermal Industries, Indio, Calif.
Torrington Mfg. Co., Torrington, Conn.

BLAST GATES

See Gates, Blast

BLOW PIPE

See Duct Fittings and Accessories

BLOW PIPE COLLECTORS

See Collectors, Blow Pipe

BLOW PIPE EQUIPMENT

See Gates, Blast; Collectors, Blow Pipe; Duct Fitting Accessories

BLOWER CONTROLS

See Controls, Blower, Speed Changing

BLOWER-FILTER UNITS, WARM AIR FURNACE

Filter and fan only

Advance Furnace Co., Wichita, Kans.
Agricola Furnace Co., Inc., Gadsden, Ala.
Air Comfort Co., South Gate, Calif.
Air Conditioning Equipment Co., Minneapolis, Minn.
Air Controls, Inc., Cleveland, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., San Leandro, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Machine Products Co., Marshalltown, Iowa.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Bovee Furnace Works, Waterloo, Iowa.
Brundage Co., Kalamazoo, Mich.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Delta Heating Corp., Trenton, N. J.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo
Furblo Co., Hermansville, Mich.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hastings Air Conditioning Co., Hastings, Nebr.
Heating Assurance, Inc., Spokane, Wash.
Henry Furnace Co., Medina, Ohio.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
Lau Blower Co., Dayton, Ohio.
Lennox Furnace Co., Marshalltown, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Marshall Furnace Co., Marshall, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Foundry & Furnace Co., Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Premier Furnace Co., Dowagiac, Mich.
Round Oak Co., Inc., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Thermo-Products, Inc., North Judson, Ind.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Waterman-Waterbury Co., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Williamson Heater Co., Cincinnati, Ohio.
Zick Sheet Metal Works, Dearborn, Mich.

BLOWER-FILTER UNITS, WARM AIR FURNACE

Equipped with humidifier and/or germicidal apparatus

National Air Conditioning Inc., Johnstown, Pa.

BLOWER HOUSINGS

See Housings, Blower and Fan

BLOWER-WASHER UNITS, WARM AIR FURNACE

Air Stream Filter Corp., St. Louis, Mo.
Airwasher Corp., Eaton Rapids, Mich.
American Machine Products Co., Marshalltown, Iowa.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Furblo Co., Hermansville, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
New York Blower Co., Chicago, Ill.

BLOWER WHEELS

See Wheels, Blower

BLOWERS, EXHAUSTERS

Aladdin Heating Corp., San Leandro, Calif.
American Machine Products Co., Marshalltown, Iowa.
Ammerman Co., C. L., Minneapolis, Minn.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Brundage Co., Kalamazoo, Mich.
Buffalo Forge Co., N. Y.
Carolina Blower Co., Inc., Greensboro, N.C.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N.J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N.Y.
Clarage Fan Co., Kalamazoo, Mich.
Cook Co., Loren, Berea, O.
Day Co., Minneapolis, Minn.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Martin Fan & Blower Co., Chicago, Ill.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Northern Blower Co., Cleveland, Ohio.
Redmond Distributors, Inc., New York, N. Y.
Skinner Htg. & Vent. Co., St. Louis, Mo.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
Woolley Engineering Co., Detroit, Mich.

BLOWERS, FORCED DRAFT, ASH PIT

Aladdin Heating Corp., San Leandro, Calif.
American Blower Corp., Detroit, Mich.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Champion Products Co., Muskegon, Mich.
Clarage Fan Co., Kalamazoo, Mich.
Coppus Engineering Corp., Worcester, Mass.
Fasco Industries, Inc., Rochester, N. Y.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
Lehigh Fan & Blower Co., Allentown, Pa.
Martin Fan & Blower Co., Chicago, Ill.
New York Blower Co., Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
South Bend Air Products, Inc., South Bend, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass
Wing Mfg. Co., L. J., Linden, N.J.

BLOWERS, FURNACE, CENTRIFUGAL

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Equipment Co., Minneapolis, Minn
Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., San Leandro, Calif.
American Blower Corp., Detroit, Mich.

American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
American Machine Products Co., Marshalltown, Iowa
Auburn Burner Co., Auburn, Ind.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Brundage Co., Kalamazoo, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Campbell Heating Co., Des Moines, Iowa.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Freed Products Co., Moline, Ill.
Frigid, Inc., Brooklyn, N. Y.
Furblo Co., Hermansville, Mich.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
Hastings Air Conditioning Co., Inc., Hastings, Nebr
International Sales Co., San Francisco, Calif.
Lau Blower Co., Dayton, Ohio.
Lennox Furnace Co., Marshalltown, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill
Majestic Co., Inc., Huntington, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Products, Inc., Cleveland, Ohio.
Mountain States Equipment Co., Denver, Colo.
Mueller Furnace Co., L. J., Milwaukee, Wis.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Schwitzer-Cummins Co., Indianapolis, Ind.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Heating Equipment Co., Waterloo, Iowa.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Waterman-Waterbury Co., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass
Zick Sheet Metal Works, Dearborn, Mich.

BLOWERS, INDUCED DRAFT, SMOKE PIPE

Aladdin Heating Corp., San Leandro, Calif. (Industrial)
American Blower Corp., Detroit, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
Ammerman Co., C. L., Minneapolis, Minn.
Autogas Co., Chicago, Ill.
Babbin, Inc., New York, N. Y.
Bayley Blower Co., Milwaukee, Wis.
Century Fan & Ventilator Co., Stamford, Conn.
Chicago Blower Corp., Franklin Park, Ill.
DeBothezat Fans Div. American Machine & Metals, Inc., Moline, Ill.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Lehigh Fan & Blower Co., Allentown, Pa.
Little Burner Co., Inc., H. C., San Rafael, Calif
Martin Fan & Blower Co., Chicago, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
New York Blower Co., Chicago, Ill.
Perfection Stove Co., Cleveland, Ohio.
Small Motors, Inc., Chicago, Ill.
Tjernlund Mfg. Co., St. Paul, Minn.
Viking Mfg. Corp., Cleveland, Ohio.
Whitty Co., Inc., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.

BLOWERS, VENTILATING SYSTEM (CAPACITY 4000 CFM UP)

Aerovent Fan Co., Inc., Piqua, O.
Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Aladdin Heating Corp., San Leandro, Calif.
American Foundry & Furnace Co., Bloomington, Ill.
American Machine Products Co., Marshalltown, Iowa.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Babbin, Inc., New York, N. Y.
Barry Blower Co., Minneapolis, Minn.
Bayley Blower Co., Milwaukee, Wis.
Berns Mfg. Co., Chicago, Ill.
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Campbell Heating Co., Des Moines, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn, N. Y.
Coppus Engineering Corp., Worcester, Mass.
Day Co., Minneapolis, Minn.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
Furblo Co., Hermansville, Mich.
Garden City Fan Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
General Blower Co., Inc., Philadelphia, Pa.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Marlo Coil Co., St. Louis, Mo.
Martin Fan & Blower Co., Chicago, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Moore Co., Marceline, Mo.
Mountain States Equipment Co., Denver, Colo.
National Engineering & Mfg. Co., Sedalia, Mo.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
Niagara Blower Co., New York, N. Y.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Robinson Ventilating Co., Zelienople, Pa.
Schwitzer-Cummins Co., Indianapolis, Ind.
Skinner Heating & Vent Co., Heater Div. of St. Louis Blow Pipe & Heater Co., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Trane Co., LaCrosse, Wis.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.

BLOWING MACHINES, INSULATION

Babbin, Inc., New York, N. Y.
Insulating Equipment Co., Chicago, Ill.
Molloy Machine Corp., Chicago, Ill.
Rotary Compressor Blower Co., Grove City, Pa.
Superior Mfg. Co., Inc., Alexandria, Ind.

BODIES AND ACCESSORIES, TRUCK

Allegheny Body Co., Inc., Philadelphia, Pa.
Anthony Co., Streator, Ill.
Automotive Div., Master Vibrator Co., Dayton, O.
Holan Corp., J. H., Cleveland, O.
McCabe Powers Auto Body Co., St. Louis, Mo.
Morrison Steel Products, Inc., Buffalo, N. Y.
Stahl Metal Products, Cleveland, O.

BOLTS, EXPANSION

Arro Expansion Bolt Co., Marion, O.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago, Ill.
Diamond Expansion Bolt Co., Inc., Garwood, N. J
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Industrial Screw Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Paine Co., Addison, Ill.
Phillips Drill Co., Michigan City, Ind.
Polis Mfg. Co., J. D., Chicago, Ill.
Rawlplug Co., Inc., New York, N. Y.
Republic Steel Corp., Cleveland, O.
Star Expansion Bolt Co., New York, N. Y.
U. S. Expansion Bolt Co., Inc., York, Pa.

BOLTS, TOGGLE AND ANCHOR

Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Expansion Bolt Co., Chicago, Ill.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fee & Mason Mfg. Co., Inc., Manasquan, N. J.
Huck Mfg. Co., Detroit, Mich.
Industrial Screw Co., Chicago, Ill.
Paine Co., Addison, Ill.
Rawlplug Co., Inc., New York, N. Y.
Republic Steel Corp., Cleveland, O.
Star Expansion Bolt Co., New York, N. Y.
U. S. Expansion Bolt Co., Inc., York, Pa.

BOMBS, SMOKE

Hill & Co., E. Vernon, Lake Geneva, Wis. (Also guns)
Kilgore, Inc., Westerville, Ohio.
Unexcelled Chemical Corp., New York, N. Y.

BOOSTER FANS

See Fans, Booster

BRAKES

See Machines, Brakes

BRUSHES, ACID

Allen Co., Inc., L. B., Chicago, Ill.
Atlas Welding Accessories Co., Ferndale, Mich.
Brushes & Brooms Co., New York, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Milwaukee Brush Mfg. Co., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio.
Potomac Mfg. Co., Philadelphia, Pa.
Schaefer Brush Mfg. Co., Milwaukee, Wis. (Rustproof).
Weiss & Co., H., New York, N. Y.

BRUSHES, FURNACE

Brushes & Brooms Co., New York, N. Y.
Harvey, Inc., Sid, Valley Stream, N. Y.
Milwaukee Brush Mfg. Co., Milwaukee, Wis.
Osborn Mfg. Co., Cleveland, Ohio.
Schaefer Brush Mfg. Co., Milwaukee, Wis.
Worcester Brush & Scraper Co., Div. Mason Worcester Co., Worcester, Mass.

BUFFERS, GRINDERS, POLISHERS, AND SANDERS, ELECTRIC

Albertson & Co., Inc., Sioux City, Iowa.
Baldor Electric Co., St. Louis, Mo.
Black & Decker Mfg. Co., Towson, Md.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Chicago Pneumatic Tool Co., New York, N. Y.
Delta Power Tool Div., Rockwell Mfg. Co., Pittsburgh, Pa.
DeSoto Oil Burner Corp., York, Pa.
DoAll Co., Des Plaines, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
H & H Research Co., Detroit, Mich.
Hammond Machinery Builders, Inc., Kalamazoo, Mich
Haskins Co., R. G., Chicago, Ill. (Flexible shaft)
Hobart Bros. Co., Troy, Ohio.
Jefferson Machine Tool Co., Cincinnati, Ohio.
Lee Co., K. O. Aberdeen, S. D.
L'Hommedieu & Sons Co., Chas. F., Chicago, Ill.
Mall Tool Co., Chicago, Ill.
Marathon Electric Mfg. Corp., Wausau, Wis.
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Portable Electric Tools, Inc., Chicago, Ill.
Reynolds Electric Co., River Grove, Ill.
Rotor Tool Co., Cleveland, Ohio. (Portable).
Skil Corporation, Chicago, Ill.
Small Motors, Inc., Chicago, Ill.
Snap-on Tools Corp., Kenosha, Wis.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
Stow Mfg. Co., Binghamton, N. Y. (Flexible shaft)
Syntron Co., Homer City, Pa.
Thor Power Tool Co., Aurora, Ill.
U. S. Electrical Motors, Inc., Los Angeles, Calif. (Buffers)
United States Electrical Tool Div., Emerson Electric Co., St. Louis, Mo.
Valley Electric Co., St. Louis, Mo.
Wyzenbeek & Staff, Inc., Chicago, Ill.
York Electric & Machine Co., York, Pa.

BUFFERS, GRINDERS, POLISHERS, AND SANDERS, PNEUMATIC

Chicago Pneumatic Tool Co., New York, N. Y. (Grinders)
Ideal Commutator Dresser Co., Sycamore, Ill.
Keller Tool Co., Grand Haven, Mich.
Rotor Tool Co., Cleveland, Ohio. (Portable)
Skil Corporation, Chicago, Ill.
Sundstrand Machine Tool Co., Rockford, Ill.
Thor Power Tool Co., Aurora, Ill.

BURNERS, CONVERSION, RESIDENTIAL, GAS

Adams Mfg. Co., Cleveland, Ohio.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Akeley-Steele Co., Aurora, Ill.
American Furnace Co., St. Louis, Mo.
American Gas Burner, Inc., Indianapolis, Ind.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Aston Products, Inc., Hazel Park, Mich.
Auburn Burner Co., Auburn, Ind.
Autogas Co., Chicago, Ill.
Automatic Firing Corp., St. Louis, Mo.
Banner Burner Co., Youngstown, Ohio.
Barber Gas Burner Co., Cleveland, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Barton Co., Minneapolis, Minn.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bowlby Air Devices Co., Wichita, Kans.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Budco, Inc., Detroit, Mich.
Burdett Mfg. Co., Chicago, Ill.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Century Engineering Corp., Cedar Rapids, Iowa.
Ceramic Products Mfg. Co., Milwaukee, Wis.
Columbia Burner Co., Toledo, Ohio.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill.
Dalzen Tool & Mfg. Co., Detroit, Mich.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Denver Fire Clay Co., Denver, Colo.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dunn-Rite Products, Garden City, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
F & E Mfg. Co., Centerville, Calif.
Famous Furnace Co., Cleveland, Ohio.
Favorite Stove Co., Piqua, O.
Finn Engineers, Inc., Jerry, St. Paul, Minn
Firewel Co., Inc., Buffalo, N. Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
Gasco Industries, Inc., Detroit, Mich.
Geisel Mfg. Inc., Elyria, Ohio.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Green Colonial Furnace Co., Des Moines, Ia.
H-P Products, Louisville, Ohio.
Handley-Brown Heater Co., Jackson, Mich.
Hansen Gas & Electric Co., San Francisco, Calif.
Hart & Crouse Corp., Oneida, N. Y.
Harvey-Whipple, Inc., Springfield, Mass.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Heatcraft Co., Louisville, Ky.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, Ohio.
Horsman-Markin Corp., Detroit, Mich.
Hutchinson Burner & Mfg. Co., Hutchinson, Kans.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Junior Co., J. C., Kansas City, Mo.
Ken-Joy Gas Burner Co., Milwaukee, Wis.
Killam Gas Burner Co., Denver, Colo.
Kindl-Aire Corp., Cleveland, Ohio.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa
LaHarco Industries, Minneapolis, Minn.
Lennox Furnace Co., Mashalltown, Iowa
Liberty Combustion Corp., Syracuse, N.Y.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Magic Servant Products Co., Detroit, Mich.

Majestic Co., Inc., Huntington, Ind.
Martin Co., Inc., J. O., San Francisco, Calif.
Martin Stamping & Stove Co., Huntsville, Ala.
Maxwell Inc., Denver, Colo.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Mid-Continent Metal Products Co., Chicago, Ill.
Modern Controls Corp., Centerline, Mich.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Multi-Therm Mfg. Co., Inc., Detroit, Mich.
Muncie Burner Mfg. Co., Romulus, Mich.
National Engineering & Mfg. Co., Sedalia, Mo.
Niagara Motors Corp., Dunkirk, N. Y.
Norge Heat Div. Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Northern Steel & Stoker Corp., Peoria, Ill.
Olsen Mfg. Co., The C. A., Elyria, Ohio
Paramount Supply Co., Lincoln, Nebr.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Quiet-Heet Mfg. Corp., Newark, N. J.
Radiation Furnace Corp., Benton Harbor, Mich.
Radiant Burners, Inc., Lombard, Ill.
Rapid Heat Corp., Detroit, Mich.
Rayfield Co., C. L., Chicago, Ill.
Revere Products, Inc., Detroit, Mich.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Round Oak Co., Inc., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., Cleveland, O.
Siemon Mfg. Co., Kansas City, Mo.
Smith Corp., A. O., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Fuel Engineering Co., Detroit, Mich.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Sterling Engineering Co., St. Louis, Mo.
Stewart Co., W. H., Oklahoma City, Okla.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sullivan Valve & Engineering Co., Butte, Mont.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sunny Sue Burner Co., Syracuse, N. Y.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, Ohio.
Synchronous Flame, Inc., Chicago, Ill.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
Thermex Engineering Co., Chicago, Ill.
Thermomatic Corp., Willoughby, Ohio.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio
Triad Products Corp., Chicago, Ill.
United States Radiator Corp., Detroit, Mich.
Vacuum Gas Burner Corp., Olean, N. Y.
Ward Heater Co., Los Angeles, Calif.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Will-Burt Co., Orrville, Ohio.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Penn.
Zink Co., John, Tulsa, Okla.

BURNERS, CONVERSION, RESIDENTIAL, GAS-OIL COMBINATION

Automatic Firing Corp., St. Louis, Mo.
Hutchinson Burner & Mfg. Co., Hutchinson, Kans.
Johnson Co., S. T., Philadelphia, Pa. & Oakland, Calif.
Junior Co., J. C., Kansas City, Mo.
Lundt, Inc., Ernest C., Little Falls, N. J.
Norman Products Co., Inc., Columbus, O.
Quiet Automatic Burner Corp., Newark, N. J.
Rayfield Co., C. L., Chicago, Ill.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Siemon Mfg. Co., Kansas City, Mo.
Synchronous Flame, Inc., Chicago, Ill.
Wisconsin Oil Burner Co., Madison, Wis.

BURNERS, CONVERSION, RESIDENTIAL, OIL, GRAVITY

Benner-Nawman, Inc., Oakland, Calif.
Beyer Metal Products Co., Rosamond, Calif.
Boston Machine Works Co., Lynn, Mass.
Breese Burners, Santa Fe, N. Mex.
DeSoto Oil Burner Corp., York, Pa.
Gilmore & Co., Jackson G., Columbus, O.
Heating Specialties Co., Baltimore, Md.
Iron Fireman Mfg. Co., Cleveland, O.
Junior Co., J. C., Kansas City, Mo.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Co., Palisades Park, N. J.
Laco Oil Burner Co., Inc., Griswold, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mason Machine Co., Inc., York, Pa.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Norman Products Co., Inc., Columbus, O.
Synchronous Flame, Inc., Chicago, Ill.
United Air Heaters, Inc., Seattle, Wash.

BURNERS, CONVERSION, RESIDENTIAL, OIL, HIGH PRESSURE

Acme Heat & Power, Inc., Brooklyn, N. Y.
Acme Oil Burner Co., Inc., Cedar Rapids, Ia.
Airflame, Waukegan, Ill.
Airtemp Div., Chrysler Corp., Dayton, O.
Aldrich Co., Wyoming, Ill.
All-Gas Equipment Co., Milwaukee, Wis.
American Furnace Co., St. Louis, Mo.
American Mohawk Co., Inc., New York, N. Y.
Armstrong Furnace Co., Columbus, O.
Arrow Foundry Co., Freeport, Ill.
Aston Products, Inc., Hazel Park, Mich.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, O.
Beckett Corp., R. W., Elyria, O.
Bethlehem Foundry & Machine Co., Bethlehem, Pa.
Bryan Steam Corp., Peru, Ind.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, O.
Caloroil Burner Corp., Hartford, Conn.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Ia.
Chalmers Oil Burner Co., Minneapolis, Minn.
Coal-O-Matic Co., Trucksville, Pa.
Conco Engineering Works, Heating Div., Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
D'Elia Oil Burner Co., Bridgeport, Conn.
Delta Heating Corp., Trenton, N. J.
DeSoto Oil Burner Corp., York, Pa.
Diesel Oil Burner Corp., Jamaica, N. Y.
Dornback Furnace & Foundry Co., Cleveland, O.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
East Coast Co., Boston, Mass.
Eastern Oil & Equipment Co., Portland, Maine
Eckhart Mfg. Co., Inc., Union, N. J.
Eclipse Fuel Engineering Co., Rockford, Ill.
Eddy Stoker Corp., Chicago, Ill.
Electric Furnace-Man, Inc., Emmaus, Pa.
Electro-Watt, Inc., Seattle, Wash.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Fairfield Oil Heating Co., Inc., Greenwich, Conn.
Fano-Flame Oil Burner Co., Huntington Park, Calif.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Fuel Savers, Inc., Harrisburg, Pa.
General Automatic Products Corp., Baltimore, Md.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., Detroit, Mich.
Green Colonial Furnace Co., Des Moines, Ia.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey, Inc., Sid, Valley Stream, N. Y.
Harvey-Whipple, Inc., Springfield, Mass.
Heat-Seal Burner Co., Omaha, Nebr.
Heatcraft Co., Louisville, Ky.
Heating Wholesalers Co., Des Moines, Ia.
Heil Co., Milwaukee, Wis.

Henry Furnace Co., Medina, O.
Herco Oil Burner Corp., Lancaster, Pa.
Hershey Machine & Foundry Co., Manheim, Pa.
HomEase Products Div., Bogue Electric Mfg. Co., Paterson, N. J.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hotentot Co., Inc., Omaha, Nebr.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Johnson Co., S. T., Oakland, Calif.
Keith Furnace Co., Des Moines, Ia.
Kleen-Heet, Inc., Chicago, Ill.
Kol-Master Corp., Oregon, Ill.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
Lennox Furnace Co., Marshalltown, Ia.
Lynn Products Co., Lynn, Mass.
Majestic Co., Huntington, Ind.
Malleable Iron Fittings Co., Branford, Conn.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McPherson Furnace & Supply Co., Portland, Ore.
Mechanical Products Co., Seattle, Wash.
Metro Metal Mfg. Co., Holt, Mich.
Metromatic Mfg. Co., Everett, Mass.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mt. Hawley Mfg. Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Airoil Burner Co., Inc., Philadelphia, Pa.
National Fuel Conservation Co., Inc., White Plains, N. Y.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Nu-Way Corp., The, Rock Island, Ill.
Oil Equipment Laboratories, Inc., Elizabeth, N. J.
Olsen Mfg. Co., The C. A., Elyria, O.
Paragon Oil Burner Corp., Brooklyn, N. Y.
Paramount Supply Co., Lincoln, Nebr.
Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Perfection Stove Co., Cleveland, O.
Petro Div., Iron Fireman Mfg. Co., Cleveland, O.
Premier Furnace Co., Dowagiac, Mich.
Premium Coal & Oil Co., Cincinnati, O.
Quick Furnace & Supply Co., Des Moines, Ia.
Quiet Automatic Burner Corp., Newark, N. J.
Quiet-Heet Mfg. Corp., Newark, N. J.
Radiant Utilities Corp., Brooklyn, N. Y.
Ray Oil Burner Co., San Francisco, Calif.
Rayfield Co., C. L., Chicago, Ill.
Red Wing Oil Burner Co., Inc., Medford, Mass.
Reichhelm Co., Robert, Stratford, Conn.
Reif-Rexoil, Inc., Buffalo, N. Y.
Richfield Mfg. Corp., New Rochelle, N. Y.
Robot Auto-Heat Corp., Middletown, Conn.
Ronci Machine Co., Inc., F., Centredale, R. I.
Rossoe Mfg. Co., Seattle, Wash.
Round Oak Co., Inc., Dowagiac, Mich.
Rybolt Heater Co., Ashland, O.
S-K Co., Inc., Camden, N. J.
Sandberg Mfg. Co., Portland, Ore.
Schwab Safe Co., Lafayette, Ind.
Scott-Newcomb, Inc., Cleveland, O.
Selectrol Engineering Co., Brooklyn, N. Y.
Silent Glow Oil Burner Co., Hartford, Conn.
Simplex Oil Heating Corp., Philadelphia, Pa.
Standard Arcoil Corp., Newark, N. J.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Stokol Stoker Co., Inc., Dayton, O.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sundstrand Engineering Co., Rockford, Ill.
Sun-Fire Stoker Corp., New Albany, Ind.
Sun-Ray Burner Mfg. Corp., Jamaica, N. Y.
Swingfire Div., Devenco, Inc., New York, N. Y. (Gasoline)
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, O.
Tru-Heet Co., Trenton, N. J.
Twin Control Burner Mfg. Co., New York, N. Y.
U. S. Burner Div., The Carlin Co., Wethersfield, Conn.
U. S. Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, O.
Volcano Burner Corp., New York, N. Y.
Waltham Oil Burner Co., Inc., Boston, Mass.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Ft. Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Will-Burt Co., Orrville, O.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, O.
Wisconsin Oil Burner Co., Madison, Wis.
York-Shipley, Inc., York, Pa.
Yorktowne Machine Co., York, Pa.

BURNERS, CONVERSION, RESIDENTIAL, OIL, LOW PRESSURE

Automatic Burner Corp., Chicago, Ill.
Bard Mfg. Co., Bryan, O.
Flame-Master Co., Chicago, Ill.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, O.
Kleen-Heet, Inc., Chicago, Ill.
Majestic Co., Huntington, Ind.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Wayne Home Equipment Co., Inc., Ft. Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.

BURNERS, CONVERSION, RESIDENTIAL, OIL, ROTARY

Caloroil Burner Corp., Hartford, Conn.
Chalmers Oil Burner Co., Minneapolis, Minn.
Diesel Oil Burner Corp., Jamaica, N. Y.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
McKee Furnace Co., Minneapolis, Minn.
Northern Steel & Stoker Corp., Peoria, Ill.
Ray Oil Burner Co., San Francisco, Calif.
Rayfield Co., C. L., Chicago, Ill.
Swirling Oil Burner Mfg. Corp., Jamaica, N. Y.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, O.

BURRING MACHINES

See Machines, Burring

CABINETS AND CASINGS

Armstrong Furnace Co., Columbus, Ohio.
Atlas Mfg. Co., St. Paul, Minn.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Berger Mfg. Co., Div. of Republic Steel Corp., Canton, Ohio.
Biersach & Neidermeyer Co., Milwaukee, Wis.
Brundage Co., Kalamazoo, Mich.
Chicago Metal Mfg. Co., Chicago, Ill.
Dahlstrom Metallic Door Co., Jamestown, N. Y. (Special)
Falstrom Co., Passaic, N. J.
Harrison Sheet Steel Co., Chicago, Ill.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Lau Blower Co., Dayton, Ohio.
Lindsay Structure, Inc., Skokie, Ill.
Maysteel Products, Inc., Milwaukee, Wis.
Moss Industries, Inc., Brooklyn, N. Y.
Northwest Foundry & Furnace Co., Portland, Ore.
Republic Steel Corp., Cleveland, O.
Riester & Thesmacher Co., Cleveland, Ohio.
St. Charles Mfg. Co., St. Charles, Ill.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Thermo-Products, Inc., North Judson, Ind.
Utica Products, Inc., Utica, N. Y.
Zick Sheet Metal Works, Dearborn, Mich.

CALCULATORS, HEATING, AIR CONDITIONING AND SHEET METAL

Calculator Specialty Co., Chicago, Ill.
Climatemaker Heat Loss Calculator Co., Bloomington, Ill.
Heating Wholesalers Co., Des Moines, Ia.
Morton Engineering Services, Paul S., Lawrence, Mich.
Perrygraf Corp., Maywood, Ill.

CANOPIES, PREFABRICATED

Air Control Products, Inc., Coopersville, Mich.
Kawneer Co., Niles, Mich.

CAPS AND TOPS, CHIMNEY

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adams Co., Dubuque, Iowa.
Airjet Ventilator Co., Pasadena, Calif.
Ammerman Co., C. L., Minneapolis, Minn.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bieler & Sons, Inc., L., Long Island City, N. Y.
Breidert Co., G. C., San Fernando, Calif.
Coleman Co., Inc., Wichita, Kans. (Crowns)
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Inland Steel Products Co., Milwaukee, Wis.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Nicework Metal Products Co., Leetsdale, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Penn Ventilator Co., Philadelphia, Pa.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Sterling Foundry Co., Sterling, Ill. (Cast Iron).
Tesco, Inc., Tulsa, Okla.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Waverly Heating Supply Co., Boston, Mass.
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Wilder Products Co., Springfield, O.

CASINGS

See Cabinets and Casings

CAULKING COMPOUNDS

See Compounds, Caulking

CEILING DIFFUSERS

See Diffusers, Air, Ceiling

CEILINGS, METAL

Alden Mfg. Co., Painesville, Ohio
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Hauserman Co., E. F., Cleveland, Ohio.
Klauer Mfg. Co., Dubuque, Iowa.
Reynolds Metals Co., Louisville, Ky. (Aluminum).
Tennessee Coal, Iron & Railroad Co., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio.
Wheeling Corrugating Co., Wheeling, W. Va.

CEMENT, FURNACE

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Armstrong Co., Chicago, Ill.
Botfield Refractories Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Chicago Fire Brick Co., Chicago, Ill.
Clinton Metallic Paint Co., Clinton, N. Y.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Hercules Chemical Co., Inc., New York, N. Y.
Hetzel Roofing Products Co., Newark, N. J.
Johns-Manville, New York, N. Y.
Keasbey Co., Robert A., New York, N. Y.
Laclede-Christy Co., St. Louis, Mo.
Lastik Products Co., Inc., Pittsburgh, Pa.
Nebel Mfg. Co., Cleveland, Ohio.
Pecora Paint Co., Philadelphia, Pa.
Plastic Products Co., Detroit, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Presstite Engineering Co., St. Louis, Mo.
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sall Mountain Co., Hamilton, Ohio.
Sauereisen Cements Co., Pittsburgh, Pa.
Smooth-on Mfg. Co., Jersey City, N. J.
Standard Asbestos Mfg. Co., Chicago, Ill.
Standard Fuel Engineering Co., Detroit, Mich.
Tamms Industries, Inc., Chicago, Ill.
United Gilsonite Laboratories, Scranton, Pa.
Walsh Refractories Corp., St. Louis, Mo.
Wilson, Inc., Grant, Chicago, Ill.

CEMENT, INSULATING

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, mineral wool & magnesia).
Alton Mineral Wool Insulation Co., St. Louis, Mo. (High temperature).
Armstrong Cork Co., Lancaster, Pa.
Asbestos Asphalt Insulation, Inc., Chicago, Ill.
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Bird-Archer, Philadelphia, Pa.
Botfield Refractories Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos, magnesia, rock wool)
Chicago Fire Brick Co., Chicago, Ill. (Asbestos).
Denver Fire Clay Co., Denver, Colo. (Vermiculite & rock wool; high temperature)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa. (Asbestos).
Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
Hallemite Mfg. Co., Cleveland, Ohio
Hetzel Roofing Products Co., Newark, N. J.
International Vermiculite Co., Girard, Ill.
Johns-Manville, New York, N. Y. (Asbestos).
Keasbey Co., Robert A., New York, N. Y. (Asbestos).
Keasbey & Mattison Co., Ambler, Pa. (Asbestos).
Laclede-Christy Co., St. Louis, Mo. (Asbestos).
Mundet Cork Corp., North Bergen, N. J. (Magnesia).
National Fuel Conservation Co., Inc., White Plains, N. Y.
Nebel Mfg. Co., Cleveland, O.
Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos, rockwool & magnesia).
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt & asbestos).
Pabco Products, Inc., San Francisco, Calif.
Peterson Co., B. A., Dowagiac, Mich. (Asbestos).
Preferred Utilities Mfg. Corp., New York, N. Y.
Pyrolite Products Co., Cleveland, Ohio.
Quigley Co., Inc., New York, N. Y. (Asbestos).
Ramtite Co., Div. of Obermayer Co., Chicago, Ill.
Refractory & Insulation Corp., New York, N. Y. (Castable refractory).
Rex Roto Corp., Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont. (Vermiculite).
Ruberoid Co., New York, N. Y. (Asbestos).
Rutland Fire Clay Co., Rutland, Vt. (Asbestos).
Sall Mountain Co., Hamilton, Ohio.
Sauereisen Cements Co., Pittsburgh, Pa.
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos).
Standard Fuel Engineering Co., Detroit, Mich. (Rock wool & asbestos).
Thompson & Co., Oakmont, Pa. (Asbestos).
Union Asbestos & Rubber Co., Chicago, Ill.
U. S. Mineral Wool Co., Stanhope, N. J. (Mineral wool)
Walsh Refractories Corp., St. Louis, Mo.
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
Zonolite Co., Chicago, Ill. (Vermiculite).

CEMENT, REFRACTORY

See Refractories

CEMENT, ROOF

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Armstrong Co., Chicago, Ill.
Baer Bros., New York, N. Y.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
Bird & Son, Inc., East Walpole, Mass.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Celotex Corp., Chicago, Ill.
Certain-teed Products Corp., Ardmore, Pa.
Clinton Metallic Paint Co., Clinton, N. Y.
Continental Products Co., Euclid, Ohio.
Coopers Creek Chemical Corp., West Conshohocken, Pa.
Flintkote Co., New York, N. Y.
Glidden Co., Cleveland, Ohio.
Hallemite Mfg. Co., Cleveland, Ohio
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Inland Steel Products Co., Milwaukee, Wis.
Insul-Mastic Corp. of America, Pittsburgh, Pa. (Asphalt)
Iowa Paint Mfg. Co., Inc., Des Moines, Iowa. (Asphalt).
Iron-Hide Sales Co., Matawan, N.J.
Johns-Manville, New York, N. Y.
Koppers Co., Inc., Pittsburgh, Pa.
Lastik Products Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Meadows, Inc., W. R., Elgin, Ill.
Midland Paint & Varnish Co., Cleveland, Ohio.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.

North American Mogul Products Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill.
Pecora Paint Co., Philadelphia, Pa. (Asbestos).
Potts-Farrington Co., Philadelphia, Pa.
Presstite Engineering Co., St. Louis, Mo.
Ruberoid Co., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Smooth-On Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Thompson & Co., Oakmont, Pa.
Tropical Paint & Oil Co., Cleveland, Ohio.
United Gilsonite Laboratories, Scranton, Pa.
United States Gypsum Co., Chicago, Ill.
Whitlam Mfg. Co., J. C., Wadsworth, O.

CHAIN, FURNACE

Bead Chain Mfg. Co., Bridgeport, Conn.
Hart & Cooley Mfg. Co., Holland, Mich.
Hodell Chain Co., Cleveland, Ohio.
McKay Co., Pittsburgh, Pa.
Round Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Russell Mfg. Co., Inc., John M., Naugatuck, Conn.
Turner & Seymour Mfg. Co., Torrington, Conn.
United States Register Co., Battle Creek, Mich.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.

CHAMBERS, COMBUSTION, PREFORMED

Amerform Corp., Philadelphia, Pa.
American Clay Forming Co., Tiffin, O.
Armstrong Cork Co., Lancaster, Pa. (Insulating refractory)
Boston Machine Works Co., Lynn, Mass. (Insulating brick)
Chicago Fire Brick Co., Chicago, Ill. (Fire clay).
Connecticut State Furnace Co., Inc., Bridgeport, Conn. (Stainless steel)
Green Fire Brick Co., A. P., Mexico, Mo. (Fire clay, insulating brick).
Harvey, Inc., Sid, Valley Stream, N. Y.
Hasko Utilities Co., New York, N. Y. (Refractory).
Insulating Castable Corp., River Rouge, Mich.
Insulation & Refractories Co., Williamson, N. Y. (Refractory concrete & insulating refractory).
Kolb Refractories Co., Philadelphia, Pa.
Laclede-Christy Co., St. Louis, Mo.
Mechanical Products Co., Seattle, Wash. (Chrome steel).
Monogram Products Co., Inc., Philadelphia, Pa. (Insulating refractory).
National Airoil Burner Co., Inc., Philadelphia, Pa.
Oil Equipment Mfg. Co., New Haven, Conn. (Inconel).
Peterson Co., B. A., Dowagiac, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y. (Refractory).
Rehm, R., St. Albans, N. Y. (Radiant silicons).
Rex Roto Corp., Detroit, Mich.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sandberg Mfg. Co., Portland, Ore. (Stainless steel).
Stefco Steel Co., Michigan City, Ind.
Universal Zonolite Insulation Co., Chicago, Ill. (Vermiculite concrete).
Walsh Refractories Corp., St. Louis, Mo. (Refractory).
Webber Co., A. R., New Haven, Conn. (Refractory).

CHANNELS

See Angles, Bars, Beams, Channels and Tees (Light Weight Shapes)

CHEMICALS, RUST PREVENTIVE

American Chemical Paint Co., Ambler, Pa.
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Cristy Specialty Corp., Worcester, Mass.
Industrial Service Laboratories, Milwaukee, Wis.
Klem Chemicals, Inc., Dearborn, Mich.
Magnus Chemical Co., Garwood, N.J.
Neilson Chemical Co., Detroit, Mich.
North American Mogul Products Co., Cleveland, Ohio.
Oakite Products, Inc., New York, N. Y.
Parker Rust-Proof Co., Detroit, Mich.
Pennsylvania Refining Co., Ohio Div., Cleveland, Ohio.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Protective Coatings, Inc., Detroit, Mich. (Remover).
Radiator Specialty Co., Charlotte, N. C.
Rossaul Co., New York, N. Y.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Solvay Process Div., Allied Chemical & Die Corp., New York, N. Y.
Sudbury Laboratory, South Sudbury, Mass.
Truscon Laboratories, Detroit, Mich.
Turco Products, Inc., Los Angeles, Calif.
Wolfe-Kote Co., Sheboygan, Wis.

CHIMNEY CAPS

See Caps and Tops, Chimney

CHIMNEY LININGS

See Linings, Chimney

CHIMNEYS, PREFABRICATED

Berger Furnace Mfg. Co., Pittsburgh, Pa.
Chimney Sales Corp., Fredricksburg, Va.
Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel).
General Products Co., Fredericksburg, Va.
Johns-Manville, New York, N. Y.
Majestic Co., Inc., Huntington, Ind.
Robot Auto-Heat Corp., Middletown, Conn.
Van-Packer Corp., Chicago, Ill.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

CLEANERS, AIR ELECTRICAL

See Filters, Air, Electrostatic

CLEANERS, POLISHERS AND FINISHERS, METAL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill. (Stainless steel & monel).
American Chemical Paint Co., Ambler, Pa.
Ampion Corp., Long Island City, N. Y. (All metals)
Brulin Co., Indianapolis, Ind. (De-greasing compound)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (All metals).
Klem Chemicals, Inc., Dearborn, Mich.
Magnus Chemical Co., Garwood, N. J.
NuSteel Co., Chicago, Ill. (Aluminum & stainless steel).
Oakite Products, Inc., New York, N. Y.
Parker Rust-Proof Co., Detroit, Mich.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa. (Ferrous and non ferrous)
Protective Coatings, Inc., Detroit, Mich.
Rossaul Co., New York, N. Y.
Standard Steel Spring Co., Gary, Ind.
Tamms Industries Inc., Chicago, Ill.
Truscon Laboratories, Detroit, Mich.
Turco Products, Inc., Los Angeles, Calif.
Western Reserve Laboratories, Cleveland, Ohio.
Wolfe-Kote Co., Sheboygan, Wis.

CLEANERS, VACUUM, FURNACE

Ace Co., Ocala, Fla.
Baker Furnace & Cleaner Mfg. Co., Toledo, Ohio.
Breuer Electric Mfg. Co., Chicago, Ill.
Chicago Blower Corp., Franklin Park, Ill.
Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
Empire Chemical Products Co., Newark, N. J.
General Blower Co., Morton Grove, Ill.
Harvey, Inc., Sid, Valley Stream, N. Y.
Hasko Utilities Co., New York, N. Y.
Ideal Industries, Inc., Sycamore, Ill.
Kent Co., Inc., Rome, N. Y.
Master-Craft Supply Co., Inc., Haverstraw, N. Y.
Molloy Machine Corp., Chicago, Ill.
National Super Service Co., Inc., Toledo, Ohio.
Pullman Vacuum Cleaner Corp., Boston, Mass.
Spencer Turbine Co., Hartford, Conn.

CLEAT BENDERS

See Machines, Cleat Bending

CLEATS, DRIVE

See Connectors, Metal

CLIPS, FASTENING, ROOFING

Bard Mfg. Co., Bryan, Ohio.
Berger Bros. Co., Philadelphia, Pa.
Bridesburg Foundry Co., Philadelphia, Pa.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
Lexsuco, Inc., Cleveland, Ohio.
Southbridge Roofing Co., Inc., Southbridge, Mass.

CLIPS AND TIPS, DAMPER

Adams Co., Dubuque, Iowa.
Air Control Products, Inc., Coopersville, Mich.
Berger Bros. Co., Philadelphia, Pa.
Gerett Corp., M. A., Milwaukee, Wis.
Griswold Mfg. Co., Erie, Pa.
Hart & Cooley Mfg. Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Kerentoff, G. L., Cincinnati, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Severson Mfg. & Supply Co., Milwaukee, Wis.
United States Register Co., Battle Creek, Mich.
Young Regulator Co., Cleveland, Ohio.

CO_2 ANALYZERS

See Analyzers, CO_2

COAL BURNERS, AUTOMATIC

See Stokers

COATINGS, PROTECTIVE, FOR METALS

See Waterproofing, Coating Material

COILS, COOLING, DIRECT EXPANSION

Acme Industries, Inc., Jackson, Mich.
Aerofin Corp., Syracuse, N. Y.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
American Coils Co., Inc., Newark, N. J.
Beacon-Morris Corp., Boston, Mass.
Betz Corp., Hammond, Ind.
Bohn Aluminum & Brass Corp., Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Conditionaire Unit Co., Chicago, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Governair Corp., Oklahoma City, Okla.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Mitchell & Co., Inc., W. K., Philadelphia, Pa.
Modine Mfg. Co., Racine, Wis.
Niagara Blower Co., New York, N. Y.
Peerless of America, Inc., Chicago, Ill.
Reco Products Div., Recony Corp., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Rinehart, Inc., Richmond, Ind.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
United States Air Conditioning Corp., Minneapolis, Minn.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

COILS, COOLING, WATER

Acme Industries, Inc., Jackson, Mich.
Aerofin Corp., Syracuse, N. Y.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Beacon-Morris Corp., Boston, Mass.
Bohn Aluminum & Brass Corp., Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Conditionaire Unit Co., Chicago, Ill.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div. General Motors Corp., Dayton, Ohio.
G & O Mfg. Co., New Haven, Conn.
Governair Corp., Oklahoma City, Okla.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Modine Mfg. Co., Racine, Wis.
National Pipe Bending Co., New Haven, Conn.
Nesbitt, Inc., John J., Philadelphia, Pa.
Niagara Blower Co., New York, N. Y.
Peerless of America, Inc., Chicago, Ill.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Roessing Mfg. Co., Sharpsburg Sta., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
United States Air Conditioning Corp., Minneapolis, Minn.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

COILS, FIRE POT, DOMESTIC HOT WATER

Adams Co., Dubuque, Iowa.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Globe Machinery & Supply Co., Des Moines, Iowa.
Marshall Furnace Co., Marshall, Mich.
Rempe Co., Chicago, Ill.

COILS, HEATING

Aerofin Corp., Syracuse, N. Y.
American Coils, Inc., Newark, N. J.
Ammerman Co., C. L., Minneapolis, Minn.
Bayley Blower Co., Milwaukee, Wis.
Beacon-Morris Corp., Boston, Mass.
Bohn Aluminum & Brass Corp., Detroit, Mich.
Bush Mfg. Co., West Hartford, Conn.
Conditionaire Unit Co., Chicago, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
G & O Mfg. Co., New Haven, Conn.
Governair Corp., Oklahoma City, Okla.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
McCord Corp., Detroit, Mich.
McQuay, Inc., Minneapolis, Minn.
Marlo Coil Co., St. Louis, Mo.
Modine Mfg. Co., Racine, Wis.
National Pipe Bending Co., New Haven, Conn.
Nesbitt, Inc., John J., Philadelphia, Pa.
New York Blower Co., Chicago, Ill.
Niagara Blower Co., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Rempe Co., Chicago, Ill.
Rigidbilt, Inc., Chicago, Ill.
Roessing Mfg. Co., Pittsburgh, Pa.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Tenney Engineering, Inc., Newark, N. J.
Trane Co., La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
United States Air Conditioning Corp., Minneapolis, Minn.
Vulcan Radiator Co., Hartford, Conn.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

COLLECTORS, BLOW PIPE

Aerotec Corp., The, Greenwich, Conn.
Aget-Detroit Co., Ann Arbor, Mich.
American Air Filter Co., Inc., Louisville, Ky.

American Blower Corp., Detroit, Mich.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Carolina Blower Co., Inc., Greensboro, N. C.
Centri-Spray Co., Detroit, Mich.
Chicago Blower Corp., Franklin Park, Ill.
Day Co., Minneapolis, Minn.
Dust Suppression & Engineering Co., Lake Orion, Mich.
Goergen-Mackwirth Engineering Co., Buffalo, N. Y. (Rarified & Cyclone)
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kindt-Collins Co., Cleveland, O.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Litman, Morris, Springfield, Mass.
Lumm Co., A. H., Toledo, Ohio.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland, Ohio.
Pangborn Corp., Hagerstown, Md.
Peters-Dalton, Inc., Detroit, Mich.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Ruemelin Mfg. Co., Milwaukee, Wis.
Skinner Heating & Vent Co., St. Louis, Mo.
Sly Mfg. Co., W. W., Cleveland, Ohio.
Torit Mfg. Co., St. Paul, Minn.
Western Blower Co., Seattle, Wash.
Western Precipitation Corp., Los Angeles, Calif.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.
Young & Bertke Co., Cincinnati, Ohio.

COMBUSTION CHAMBERS

See Chambers, Combustion, Preformed; Baffles, Combustion Chamber, Oil Burner and Stoker

COMBUSTION CONTROLS

See Controls; Dampers, Draft

COMPOUNDS, AIR FRESHENING

Carbide & Carbon Chemicals Co., Div. Union Carbide & Chemical Corp., New York, N. Y.

COMPOUNDS, CAULKING

Adhesives & Coatings Div., Minnesota Mining & Mfg. Co., Detroit, Mich.
Allmetal Weatherstrip Co., Chicago, Ill.
American Fluresit Co., Inc., Cincinnati, Ohio.
American-Marietta Co., Chicago, Ill.
Armstrong Co., Chicago, Ill.
Babbitt Chemical Specialties Co., New Bedford, Mass.
Baer Bros., New York, N. Y.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Blue Ridge Talc Co., Inc., Henry, Va.
Calbar Paint & Varnish Co., Philadelphia, Pa. (Also caulking guns)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Colored)
Carter Paint Co., Liberty, Ind.
Chamberlin Co. of America, Detroit, Mich.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Continental Products Co., Euclid, Ohio.
Division Lead Co., Summit, Ill.
Flintkote Co., New York, N. Y.
Glidden Co., Cleveland, Ohio.
Goodrich Co., B. F., Akron, Ohio.
Hercules Chemical Co., Inc., New York, N. Y.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Iowa Paint Mfg. Co., Inc., Des Moines, Ia.
Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., Irvington, N. J.
Johns-Manville, New York, N. Y.
Lastik Products Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Meadows, Inc., W. R., Elgin, Ill.
Midland Paint & Varnish Co., Cleveland, Ohio.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt).
Pabco Products, Inc., San Francisco, Calif.
Pecora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Plastic Products Co., Detroit, Mich.
Presstite Engineering Co., St. Louis, Mo.
Products Research Co., Los Angeles, Calif.
Quigley Co., Inc., New York, N. Y.
Robertson Co., H. H., Pittsburgh, Pa.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Sherwin-Williams Co., Cleveland, Ohio.
Sipe & Co., James B., Pittsburgh, Pa.
Smooth-on Mfg. Co., Jersey City, N. J.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont, Pa.
Tropical Paint & Oil Co., Cleveland, Ohio.
Truscon Laboratories, Detroit, Mich.
Whitlam Mfg. Co., J. C., Wadsworth, O.
X-Pando Corp., Long Island City, N. Y.

COMPOUNDS, CLEANING, AIR FILTER

Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Dollinger Corp., Rochester, N. Y.
Magnus Chemical Co., Garwood, N.J.
Oakite Products, Inc., New York, N. Y.
Turco Products, Inc., Los Angeles, Calif.

COMPOUNDS, CLEANING, CONDENSERS AND COILS

American Chemical Paint Co., Ambler, Pa.
Aquatrol Laboratories, Inc., Clifton, N. J.
Bird-Archer Co., Philadelphia, Pa.
Carolina Aniline & Extract Co., Inc., Charlotte, N. C.
Chemical Solvent Co., Birmingham, Ala.
Dearborn Chemical Co., Chicago, Ill.
Hercules Chemicals Co., Inc., New York, N. Y.
Madden Corp., The, Chicago, Ill.
Magnus Chemical Co., Garwood, N. J.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Oakite Products, Inc., New York, N. Y.
Pennsylvania Salt Mfg. Co., Philadelphia, Pa.
Radiator Specialty Co., Charlotte, N. C.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Turco Products, Inc., Los Angeles, Calif.
Virginia Smelting Co., West Norfolk, Va.

COMPOUNDS, WATER CONDITIONING

Garman Co., Inc., St. Louis, Mo.

COMPRESSORS, REFRIGERATING, OPEN

Bakeraire Corp., South Windham, Maine.
Brunner Mfg. Co., Utica, N. Y.
Copeland Refrigeration Corp., Sidney, Ohio.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Diceler Div. General Machine & Mfg. Co., Berwick, Pa.
Frigidaire Div. General Motors Corp., Dayton, Ohio.
Lehigh Mfg. Co., Lancaster, Pa.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Reliance Refrigerating Machine Co., Chicago, Ill.
Reynolds Mfg. Co., Springfield, Mo.
Tecumseh Products Co., Tecumseh, Mich.
Trane Co., LaCrosse, Wis.
Worthington Corp., Harrison, N. J.
Yeomans Bros. Co., Melrose Park, Ill.
York Corp., York, Pa.

COMPRESSORS, REFRIGERATING, SEALED

Airtemp Div. Chrysler Corp., Dayton, Ohio.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Copeland Refrigeration Corp., Sidney, Ohio.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Lehigh Mfg. Co., Lancaster, Pa.
Servel, Inc., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

CONDENSERS, REFRIGERATING, AIR COOLED

Airtemp Div. Chrysler Corp., Dayton, Ohio.
Bakeraire Corp., South Windham, Maine.
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Condenser Service & Engrg. Co., Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Fedders-Quigan Corp., Buffalo, N. Y.
Frigidaire Div., General Motors Corp., Dayton, Ohio.

Heat-X-Changer Co., The, Brewster, N. Y. (1/3 hp to 5 hp)
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
McQuay, Inc., Minneapolis, Minn.
Rome-Turney Radiator Co., Rome, N. Y.
Super Radiator Corp., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

CONDENSERS, REFRIGERATING, EVAPORATIVE

Acme Industries, Inc., Jackson, Mich.
Baltimore Aircoil Co., Inc., Baltimore, Md.
Brunner Mfg. Co., Utica, N. Y.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Coleman Co., Inc., Wichita, Kans.
Condenser Service & Engineering Co., Inc., Hoboken, N. J.
Crowell & Dunn, Inc., New York, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
DeSoto Oil Burner Corp., York, Pa.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div., General Motors Corp., Dayton, O.
Governair Corp., Oklahoma City, Okla.
Harry Cooling Towers, Inc., New York, N. Y.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Niagara Blower Co., New York, N. Y.
Power-Freze, Inc., Atlanta, Ga.
Refrigeration Economics Co., Inc., Canton, O.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Servel, Inc., Evansville, Ind.
Tenney Engineering, Inc., Newark, N. J.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
XL Refrigerating Co., Chicago, Ill.
York Corp., York, Pa.

CONDENSERS, REFRIGERATING, SHELL AND COIL

Acme Industries, Inc., Jackson, Mich.
Autorad Inc., Chicago, Ill.
Brown Fintube Co., The, Elyria, O.
Carrier Corp., Syracuse, N. Y.
Condenser Service & Engineering Co., Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Dersch, Gesswein & Neuert, Inc., Chicago, Ill.
Doyle & Roth Mfg. Co., Brooklyn, N .Y.
Drayer-Hanson, Inc., Los Angeles, Calif.
General Fittings Co., Providence, R. I.
Halstead & Mitchell, Pittsburgh, Pa. (Double tube)
Heat-X-Changer Co., Inc., The, Brewster, N. Y.
Nooter Corp., St. Louis, Mo.
Reco Products Div., Recony Corp., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, O.
Rempe Co., Chicago, Ill.
Rome-Turney Radiator Co., Rome, N. Y.
Standard Refrigeration Co., Chicago, Ill.
X L Refrigerating Co., Chicago, Ill.

CONDENSERS, REFRIGERATING, SHELL AND TUBE

Acme Industries, Inc., Jackson, Mich.
Autorad Inc., Chicago, Ill.
Biggs Boiler Works Co., E., Akron, O.
Brown Fintube Co., The, Elyria, O.
Carrier Corp., Syracuse, N. Y.
Condenser Service & Engineering Co , Inc., Hoboken, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Devine Mfg. Co., J. P., Div. of H. K. Porter Co., Inc., Pittsburgh, Pa.
Doyle & Roth Mfg. Co., Brooklyn, N. Y.
Drayer-Hanson, Inc., Los Angeles, Calif.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Halstead & Mitchell, Pittsburgh, Pa.
Howard Iron Works & Alberger Heater Div., Buffalo, N. Y.
Nooter Corp., St. Louis, Mo.
Reco Products Div., Recony Corp., New York, N. Y.
Refrigeration Economics Co., Inc., Canton, O.
Semet-Solvay Engineering Div., Allied Chemical & Dye Corp., New York, N. Y.
Stewart Ice Machine Co., Pomona, Calif.
Vogt Machine Co., Henry, Louisville, Ky.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wittenmeier Machinery Co., Chicago, Ill.
Worthington Corp., Harrison, N. J.
X L Refrigerating Co., Chicago, Ill.
York Corp., York, Pa.

CONDENSING UNITS, REFRIGERATING, OPEN

Consisting of compressor, condenser, motor, receiver and base

Bakeraire Corp., South Windham, Maine
Brunner Mfg. Co., Utica, N. Y.
Copeland Refrigeration Corp., Sidney, O.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Lehigh Mfg. Co., Lancaster, Pa.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Reliance Refrigerating Machine Co., Chicago, Ill.
Tecumseh Products Co., Tecumseh, Mich.
Trane Co., LaCrosse, Wis.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

CONDENSING UNITS, REFRIGERATING, SEALED

Consisting of compressor, condenser, motor, receiver and base

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Copeland Refrigeration Corp., Sidney, O.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Lehigh Mfg. Co., Lancaster, Pa.
Servel, Inc., Evansville, Ind.
Tecumseh Products Co., Tecumseh, Mich.
Westinghouse Elec., Corp., Sturtevant Div., Boston, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

CONDUCTOR PIPE AND FITTINGS

See Pipe, Conductor; Duct Fitting Accessories, Conductor

CONNECTIONS, DUCT, FLEXIBLE

American Metal Hose Branch, American Brass Co., Waterbury, Conn.
Corbman Bros., Inc., Philadelphia, Pa.
Elgen Mfg. Corp., Long Island City, N. Y.
Felters Co., Inc., Boston, Mass. (Felt)
Flexible Tubing Corp., Guilford, Conn. (Coated Fabric)
Flexonics Corp., Maywood, Ill.
Iden Associates, Chicago, Ill.
St. Clair Rubber Co., Marysville, Mich. (Fiberglas)
Sall Mountain Co., Hamilton, O.
United States Rubber Co., New York, N. Y.
Wagner Awning & Mfg. Co., Cleveland, Ohio.
Wilson, Inc., Grant, Chicago, Ill. (Asbestos).
Wiremold Co., Hartford, Conn.

CONNECTORS, METAL, FOR METAL DUCTS

Acme Mfg. Co., Philadelphia, Pa.
Carolina Blowers Co., Inc., Greensboro, N. C.
Corbman Bros., Inc., Philadelphia, Pa.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
Ralph Mfg. Co., Inc., Wadsworth, O.

CONTROLS, BLOWER, SPEED CHANGING

Airgard Mfg. Co., Chicago, Ill.
Ammerman Co., C. L., Minneapolis, Minn.
Ballastran Corp., Ft. Wayne, Ind.
Carvell Heat Equipment Co., Los Angeles, Calif.
National Modulation Co., St. Paul, Minn.

CONTROLS, COMBINATION FAN AND LIMIT, LINE OR LOW VOLTAGE

Automatic Devices Co., Inc., Western Springs, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Cook Electric Co., Chicago, Ill.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Controls Corp., Detroit, Mich.
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Standard Remote Control Valve Co., South Pasadena, Calif.
Therm-O-Disc, Inc., Mansfield, Ohio.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, COMBUSTION, LINE OR LOW VOLTAGE

Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Combustion Control Corp., Cambridge, Mass.
Crown Controls Co., Inc., New Bremen, Ohio.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill. (Industrial)
General Controls Co., Glendale, Calif.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls, Inc., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, FAN

Allen-Bradley Co., Milwaukee, Wis.
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Cam-Stat, Inc., Div. Paul Henry Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Therm-O-Disc, Inc., Mansfield, Ohio.
United Electric Controls Co., Watertown, Mass.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, HUMIDISTATS

Abbeon Supply Co., Jamaica, N. Y.
Barber-Colman Co., Rockford, Ill.
General Controls Co., Glendale, Calif.
H-B Instrument Co., Inc., Philadelphia, Pa.
Johnson Service Co., Milwaukee, Wis.
Maid-O'-Mist, Inc., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Taylor Instrument Companies, Rochester, N. Y.
Walton Laboratories, Inc., Irvington, N. J.

CONTROLS, LIMIT, LINE OR LOW VOLTAGE

Allen-Bradley Co., Milwaukee, Wis. (Low).
Au-Temp-Co Corp., New York, N. Y.
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio. (Low)
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Therm-O-Disc, Inc., Mansfield, Ohio.
United Electric Controls Co., Watertown, Mass.
Westinghouse Electric Corp., Pittsburgh, Pa.
Weston Electrical Instruments Corp., Newark, N. J.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, MOTORS, DUCT DAMPER, MODULATING OR PROPORTIONING

Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
General Blower Co., Inc., Philadelphia, Pa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

CONTROLS, MOTORS, DUCT DAMPER, TWO POSITION

Au-Temp-Co Corp., New York, N. Y.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Crise Controls, Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
General Blower Co. Inc., Philadelphia, Pa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.

CONTROLS, MOTORS, DRAFT DAMPER, ELECTRICAL

Au-Temp-Co Corp., New York, N. Y.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Barber-Colman Co., Rockford, Ill.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
General Blower Co. Inc., Philadelphia, Pa.
Kol-Master Corp., Oregon, Ill.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Square D Co., Detroit, Mich.
White Mfg. Co., St. Paul, Minn.

CONTROLS, PILOT, GAS BURNER

A-P Controls Corp., Milwaukee, Wis.
Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Co., Compton, Calif.
Cleveland Heater Co., Cleveland, Ohio.
Continental Instrument Co., Cleveland, Ohio.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill.
General Controls Co., Glendale, Calif.
Mercoid Corp., Chicago, Ill.
Milwaukee Gas Specialty Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Modern Materials, Inc., Northville, Mich.
Newell & Sons, Irwin, Pa.
Patrol Valve Co., Cleveland, Ohio. (Also gas pilot filters)
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Robertshaw Thermostat Div. Robertshaw-Fulton Controls Co., Youngwood, Pa.
Standard Remote Control Valve Co., Inc., South Pasadena, Calif.
Therm-O-Disc, Inc., Mansfield, Ohio.
Titan Valve & Mfg. Co., Cleveland, Ohio.
White-Rodgers Electric Co., St. Louis, Mo.
Zink Co., John, Tulsa, Okla.

CONTROLS, PRESSURE, REFRIGERATING

A-P Controls Corp., Milwaukee, Wis.
Automatic Control Co., St. Paul, Minn.
Barksdale Valves, Los Angeles, Calif.
Cook Electric Co., Chicago, Ill.
Giannini & Co., Inc., G. M., Pasadena, Calif.
Henry G. Dietz Co., Long Island City, N. Y.
Marsh Corp., Jas. P., Skokie, Ill.
McQuay-Norris Mfg. Co., St. Louis, Mo.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Ranco, Inc., Columbus, Ohio.
Shallcross Controls, Inc., Milwaukee, Wis.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, RELAYS, ELECTRICAL

Allen-Bradley Co., Milwaukee, Wis.
American Instrument Co., Inc., Silver Spring, Md.
Arrow-Hart & Hageman Electric Co., Hartford, Conn.
Au-Temp-Co Corp., New York, N. Y.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
B/W Controller Corp., Birmingham, Mich.
Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.

Clark Controller Co., Cleveland, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cramer Co., Inc., R. W., Centerbrook, Conn. (Time)
Cutler-Hammer, Inc., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Electronic Products Co., St. Charles, Ill. (Photo-electric)
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago, Ill.
Hart Mfg. Co., Hartford, Conn.
H-B Instrument Co., Philadelphia, Pa.
Industrial Engineering Corp., Terre Haute, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Monitor Controller Co., Boston, Mass.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Philadelphia Thermometer Co., Philadelphia, Pa.
Photoswitch, Inc., Cambridge, Mass.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Reynolds Electric Co., River Grove, Ill.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
Weston Electrical Instrument Corp., Newark, N. J.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

CONTROLS, SWITCHES, MAGNETIC

Allen-Bradley Co., Milwaukee, Wis.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
B/W Controller Corp., Birmingham, Mich.
Barber-Colman Co., Rockford, Ill.
Clark Controller Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Electric Controller & Mfg. Co., Cleveland, Ohio.
Furnas Electric Co., Batavia, Ill.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Guardian Electric Mfg. Co., Chicago, Ill.
H-B Instrument Co., Philadelphia, Pa.
Hart Mfg. Co., Hartford, Conn. (Mercury Tube).
Industrial Engineering Corp., Terre Haute, Ind.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Monitor Controller Co., Boston, Mass.
Palmer Electric Co., Chicago, Ill.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich.
Square D Co., Indus. Controller Div., Milwaukee, Wis.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

CONTROLS, SWITCHES, MANUAL

Allen-Bradley Co., Milwaukee, Wis.
Arrow-Hart & Hegeman Electric Co., Hartford, Conn.
Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
Furnas Electric Co., Batavia, Ill.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Hart Mfg. Co., Hartford, Conn.
Industrial Engineering Corp., Terre Haute, Ind.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Soreng Mfg. Co., Schiller Park, Ill.
Square D Co., Detroit, Mich.
Square D Co., Indus. Controller Div., Milwaukee, Wis.
Ward Leonard Electric Co., Mount Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.

CONTROLS, SWITCHES, TIME

Allen-Bradley Co., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Automatic Controls Corp., Ann Arbor, Mich.
Automatic Devices Co., Inc., Western Springs, Ill.
Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Switch Co., Orange, N. J.
Automatic Temperature Control Co., Inc., Philadelphia, Pa
Barber-Colman Co., Rockford, Ill.
Bristol Co., Waterbury, Conn.
Clark Controller Co., Cleveland, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cramer Co., Inc., The R. W., Centerbrook, Conn.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Industrial Engineering Corp., Terre Haute, Ind.
International Register Co., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, O.
Landis & Gyr, Inc., New York, N. Y.
Mercoid Corp., Chicago, Ill.
Miller-Harris Instrument Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Palo-Myers, Inc., New York, N. Y.
Perfex Corp., Milwaukee, Wis.
Photoswitch, Inc., Cambridge, Mass.
R. B. Enterprises, Inc., Detroit, Mich.
Reliance Automatic Lighting Co., Racine, Wis.
Reynolds Electric Co., River Grove, Ill.
Rhodes, Inc., M. H., Hartford, Conn.
Sangamo Electric Co., Springfield, Ill.
Telechron, Inc., Ashland, Mass.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
Ward Leonard Electric Co., Mt. Vernon, N. Y.
Westinghouse Electric Corp., Pittsburgh, Pa.
White-Rodgers Electric Co., St. Louis, Mo.
Zenith Electric Co., Chicago, Ill.

CONTROLS, THERMOSTATS, CLOCK, DAY AND NIGHT

Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McQuay-Norris Mfg. Co., St. Louis, Mo.
Mercoid Corp., Chicago, Ill.
Miller-Harris Instrument Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Paragon Elec. Co., Two Rivers, Wis.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Powers Regulator Co., Skokie, Ill.
Sarcotherm Controls, Inc., New York, N. Y.
Tork Clock Co., Inc., Mt. Vernon, N. Y.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, THERMOSTATS, DOMESTIC WATER HEATER

A-P Controls Corp., Milwaukee, Wis.
Ajax Thermostatic Controls Co., Gates Mills, Ohio.
American Control Co., Compton, Calif.
American Instrument Co., Inc., Silver Spring, Md.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Cleveland Heater Co., Cleveland, Ohio.
Cutler-Hammer, Inc., Milwaukee, Wis.
General Controls Co., Glendale, Calif.
Hart Mfg. Co., Hartford, Conn.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Perfex Corp., Milwaukee, Wis.
Powers Regulator Co., Skokie, Ill.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Therm-O-Disc, Inc., Mansfield, Ohio.
Titan Valve & Mfg. Co., Cleveland, Ohio.
Westinghouse Electric Corp., Pittsburgh, Pa.

CONTROLS, THERMOSTATS, HEAT ACCELERATED OR ANTICIPATING

A-P Controls Corp., Milwaukee, Wis.
Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Cooper Co., Clark, Palmyra, N. J.

Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
Fulton Sylphon Div. Robertshaw-Fulton Controls Co., Knoxville, Tenn.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
General Controls Co., Glendale, Calif.
H-B Instrument Co., Philadelphia, Pa.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Miles Heating Enterprises, Cleveland, O.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Sarcotherm Controls, Inc., New York, N. Y.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, THERMOSTATS, LINE OR LOW VOLTAGE

A-P Controls Corp., Milwaukee, Wis.
American Instrument Co., Inc., Silver Spring, Md.
Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Cam-Stat Inc., Div. Paul Henry Co., Los Angeles, Calif.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., Inc., New Bremen, Ohio.
Detroit Controls Corp., Detroit, Mich.
General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
H-B Instrument Co., Philadelphia, Pa.
Iron Fireman Mfg. Co., Cleveland, Ohio.
McCorkle Co., D. H., Berkeley, Calif.
McQuay-Norris Mfg. Co., St. Louis, Mo.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Sarco Co., Inc., New York, N. Y.
Sarcotherm Controls, Inc., New York, N. Y.
Spencer Thermostat Div. Metals & Controls Corp., Attleboro, Mass.
Standard Remote Control Valve Co., South Pasadena, Calif
United Electric Controls Co., Watertown, Mass.
Westinghouse Electric Corp., Pittsburgh, Pa.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, THERMOSTATS, MODULATING OR PROPORTIONING

A-P Controls Corp., Milwaukee, Wis.
Atlas Valve Co., Newark, N. J. (Pneumatic)
Automatic Devices Co., Inc., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo.
Johnson Service Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Powers Regulator Co., Skokie, Ill.
Superior Controls Co., Inc., Los Angeles, Calif.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROLS, THERMOSTATS, WEATHER COMPENSATING

Automatic Devices Co., Inc., Weather Controls Div., Western Springs, Ill.
Barber-Colman Co., Rockford, Ill.
Detroit Controls Corp., Detroit, Mich.
Heat-Timer Corp., New York, N. Y.
Illinois Engineering Co., Chicago, Ill.
Johnson Service Co., Milwaukee, Wis.
McLarty Systems, Battle Creek, Mich.
Miller Heat-O-Meter Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Powers Regulator Co., Skokie, Ill.
Sarcotherm Controls, Inc., New York, N. Y.
United Electric Controls Co., Watertown, Mass.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, ACCESSORIES

Terminals, terminal blocks, connectors, ignition cable, thermostat cable, etc.

Buchanan Electric Products Corp., Hillside, N. J.
Barber-Colman Co., Rockford, Ill.

CONTROL SYSTEMS, FLAME FAILURE

American District Telegraph Co., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Bristol Co., The, Waterbury, Conn.
Canton Stoker Corp., Canton, Ohio.
Combustion Control Corp., Boston, Mass.
De-Tec-Tronic Corp., Chicago, Ill.
Drying Systems, Inc., Chicago, Ill.
Eclipse Fuel Engineering Co., Rockford, Ill.
Electronic Products Co., St. Charles, Ill.
Ess Instrument Co., Bergenfield, N. J.
Fuelguard Co., Dallas, Texas.
General Electric Co., Schenectady, N. Y.
Haney Gas Burner & Engrs., Monrovia, Calif.
Mercoid Corp., Chicago, Ill.
Mettler Co., Inc., The, Los Angeles, Calif.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

CONTROL SYSTEMS, GAS BURNER, COMPLETE ASSEMBLY

A-P Controls Corp., Milwaukee, Wis.
Detroit Controls Corp., Detroit, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
General Controls Co., Glendale, Calif.
Haney Gas Burner & Engrs., Monrovia, Calif.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, O.
Mettler Co., Inc., The, Los Angeles, Calif.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Mueller Furnace Co., L. J., Milwaukee, Wis. (Modulating)
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
R. B. Enterprises, Inc., Detroit, Mich.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, GRAVITY FURNACE, HAND-FIRED, COMPLETE ASSEMBLY

Barber-Colman Co., Rockford, Ill.
Bearlee Products Co., Green Bay, Wis.
Crise Controls Div. Acro Mfg. Co., Columbus, Ohio.
Crown Controls Co., New Bremen, Ohio.
Defender Instrument & Regulator Co., St. Louis, Mo.
General Controls Co., Glendale, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS, ELECTRICAL

Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Clark Controller Co., Cleveland, Ohio.
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Mercoid Corp., Chicago, Ill.
Midwest Automatic Control Co., Des Moines, Iowa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, OIL BURNER, COMPLETE ASSEMBLY

A-P Controls Corp., Milwaukee, Wis.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Controls Corp., Detroit, Mich.
Electronic Products Co., St. Charles, Ill.
Ess Instrument Co., Bergenfield, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, O.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls Inc., Milwaukee, Wis.
Wheelco Instruments Div., Barber-Coleman Co., Rockford, Ill.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, STOKER, COMPLETE ASSEMBLY

Defender Instrument & Regulator Co., St. Louis, Mo.
Hays Corp., Michigan City, Ind.
Iron Fireman Mfg. Co., Cleveland, Ohio
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Palmer Electric Co., Chicago, Ill.

Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Shallcross Controls Co., Inc., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, WINTER AIR CONDITIONING FURNACE, HAND FIRED, COMPLETE ASSEMBLY

Barber-Colman Co., Rockford, Ill.
Crown Controls Co., Inc., New Bremen, Ohio.
General Controls Co., Glendale, Calif.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
White-Rodgers Electric Co., St. Louis, Mo.

CONTROL SYSTEMS, ZONE, COMPLETE ASSEMBLY

Au-Temp-Co Corp., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Burke Engineering Co., Los Angeles, Calif.
Crise Controls Div., Acro Mfg. Co., Columbus, Ohio.
Dole Valve Co., Chicago, Ill.
General Controls Co., Glendale, Calif.
Johnson Service Co., Milwaukee, Wis.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Young Regulator Co., Cleveland, O.

COOLING COILS

See Coils, Cooling

COOLING UNITS

See Units, Air Conditioning

COOLING TOWERS

See Towers, Cooling

COPPER PIPE

See Tubing, Copper

COPPER SHEETS

See Sheets, Metal, Copper

COPPER TUBE FITTINGS

See Fittings, Copper Tube

COPPERS, SOLDERING

Acme Electric Heating Co., Inc., Boston, Mass. (Electric)
American Electric Heater Co., Detroit, Mich.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Electric Soldering Iron Co., Inc., Deep River, Conn. (Electric)
Everhot Mfg. Co., Maywood, Ill.
General Electric Co., Schenectady, N. Y. (Electric)
Hexacon Electric Co., Roselle Park, N. J. (Electric)
Hussey & Co., C. G., Pittsburgh, Pa.
Ideal Industries, Inc., Sycamore, Ill.
Insto-Gas Corp., Detroit, Mich. (Gas)
Kwikheat Mfg. Co., Glendale, Calif. (Electric)
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Minn-Kota Foundry & Mfg. Co., Fargo, N. Dak.
Nelpin Mfg. Co., Long Island City, N. Y. (Feeding attachment)
Ransome Co., Emeryville, Calif. (Gas)
Reiner & Campbell Co., Inc., Newark, N. J.
Sight Feed Generator Co., West Alexandria, Ohio.
Stanley Tools, New Britain, Conn.
Torit Mfg. Co., St. Paul, Minn.
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
Weiss & Co., H., New York, N. Y.

CRIMPING MACHINES

See Machines, Crimping

CURTAIN WALL PANELS

See Panels, Curtain Wall

DAMPER, DUCT, REGULATOR SETS

See Regulators, Duct Damper Sets

DAMPER MOTORS

See Controls, Motors

DAMPERS, BACK DRAFT

See Louvers and Shutters

DAMPERS, DIFFUSER

Air Control Products, Inc., Coopersville, Mich.
Barber-Colman Co., Rockford, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.

DAMPERS, DRAFT, BAROMETRIC

Atlas Valve Co., Newark, N. J.
Barber-Colman Co., Rockford, Ill.
Boston Machine Works Co., Lynn, Mass.
Breese Burners, Inc., Santa Fe, N. Mex.
Cole-Sewell Engineering Co., St. Paul, Minn.
Combustion Equipment Co., Silvis, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Field Control Div., H. D. Conkey & Co., Mendota, Ill.
Fuel Reduction Corp., Chicago, Ill.
Hotstream Heater Co., Cleveland, Ohio
James Regulator Co., Inc., Hamburg, Pa.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Krueger Sentry Gauge Co., Green Bay, Wis.
Perfex Corp., Milwaukee, Wis.
Preferred Utilities Mfg. Corp., New York, N. Y.
Shallcross Controls, Inc., Milwaukee, Wis.
Simplex Mfg. Co., Fond du Lac, Wis.
Steinen Mfg. Co., Wm., Newark, N. J.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Windmaster, Inc., Columbus, Ohio.

DAMPERS, DUCT

Berger Furnace Mfg. Co., Pittsburgh, Pa.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Corbman Bros., Inc., Philadelphia, Pa.
Damp-Vent Co., Bettendorf, Ia. (Automatic)
Young Regulator Co., Cleveland, O.

DAMPERS, SMOKE PIPE

Adams Co., Dubuque, Iowa.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co. Columbus, Ohio.
Char-Gale Mfg. Co., Minneapolis, Minn.
Corbman Bros., Inc., Philadelphia, Pa.
Eselgroth & Co., Newark, N. J.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Griswold Mfg. Co., Erie, Pa.
Hart & Cooley Mfg. Co., Holland, Mich.
Hotstream Heater Co., Cleveland, Ohio.
Howes-Woods Co., Cambridge, Mass.
J & J Sheet Metal Co., Van Dyke, Mich.
Keith Furnace Co., Des Moines, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co, Marshall, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Fuel Conservation Co., Inc., White Plains, N. Y.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Preferred Utilities Mfg. Corp., New York, N. Y.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
United States Register Co., Battle Creek, Mich.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Wheeling Corrugating Co., Wheeling, W. Va.
Williamson Heater Co., Cincinnati, Ohio.

DAMPERS, STACK HEAD

Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Air Control Products, Inc., Coopersville, Mich.
Aireflo Furnace Pipe Co., Brighton, Mich.
Barber-Colman Co., Rockford, Ill.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Corbman Bros., Inc., Philadelphia, Pa.
Excelsior Steel Furnace Co., Chicago, Ill.
Henry Furnace Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Peacard Co., M. A., Boston, Mass.
Truscon Steel Co., Youngstown, Ohio.

DAMPERS, WARM AIR PIPE

Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Brighton, Mich.
Adams Co., Dubuque, Iowa.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Char-Gale Mfg. Co., Minneapolis, Minn.
Corbman Bros., Inc., Philadelphia, Pa.
Excelsior Steel Furnace Co., Chicago, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Marshall Furnace Co., Marshall, Mich.
Peacard Co., M. A., Boston, Mass.
Peerless Foundry Co., Indianapolis, Ind.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Thor Metal Products Co., Inc., Syracuse, N. Y.
United States Register Co., Battle Creek, Mich.
Wheeling Corrugating Co., Wheeling, W. Va.
Williamson Heater Co., Cincinnati, Ohio.
Young Regulator Co., Cleveland, Ohio.

DEHUMIDIFIERS, ABSORPTION AND ADSORPTION

Abbeon Supply Co., Jamaica, N. Y.
Air Conditioning Engineering Co., Cambridge, Mass.
Air and Refrigeration Corp., New York, N. Y.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Adsorption)
Carbide and Carbon Chemicals Co., Div. Union Carbide & Chemical Corp., New York, N. Y. (Triethylene glycol)
Cargocaire Engineering Corp., New York, N. Y.
Carrier Corp., Syracuse, N. Y.
Daly, Merritt & Sullivan, Inc., Falls Church, Va.
Dryomatic Corp., Alexandria, Va.
Floridin Co., Warren, Pa.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kaufman Co., H. J., Detroit, Mich. (Absorption)
Lonergan Mfg. Co., Albion, Mich.
Pittsburgh Lectrodryer Corp., Pittsburgh, Pa.
Rodgers Diesel & Air Craft Corp., New York, N. Y.
Solvay Process Div., Allied Chemical & Dye Corp., New York, N. Y.
Surface Combustion Corp., Toledo, Ohio.
Tamms Industries Inc., Chicago, Ill.
York Corp., York, Pa.

DEHUMIDIFIERS, REFRIGERATING TYPE, PORTABLE

Abbeon Supply Co., Jamaica, N. Y.
Cargocaire Engineering Corp., New York, N. Y.
Ebco Mfg. Co., Columbus, Ohio.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Fedders-Quigan Corp., Buffalo, N. Y.
Fresh'nd-Aire Co., Chicago, Ill.
Frigidaire Div., General Motors Corp., Dayton, O.
Haertel Co., Walter, Minneapolis, Minn.
Hotpoint Co., Chicago, Ill.
Jordon Refrigerator Co., Inc., Philadelphia, Pa.
Kauffman Air Conditioning Co., St. Louis, Mo.
Lonergan Mfg. Co., Albion, Mich.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Mitchell Mfg. Co., Chicago, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Ohio Foundry & Mfg. Co., Steubenville, O.
Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Walton Laboratories, Inc., Irvington, N. J.
Westinghouse Elec. Corp., Elec. Appliance Div., Springfield, Mass.

DEHYDRATORS, REFRIGERANT

Ansul Chemical Co., Refrigeration Div., Marinette, Wis.
Aminco Refrigeration Products Co., Detroit, Mich.
Eagle Chemical Co., Inc., Joliet, Ill.
Henry Valve Co., Melrose Park, Ill.
Highside Chemicals Co., Clifton, N. J.
Imperial Brass Mfg. Co., Chicago, Ill.
Kenmore Machine Products, Inc., Lyons, N. Y.
McIntire Co., The, Livingston, N. J.
Mueller Brass Co., Port Huron, Mich.
Remco, Inc., Zelienople, Pa.
Selas Corp. of America, Philadelphia, Pa.
Sporlan Valve Co., St. Louis, Mo.
Superior Valve and Fittings Co., Pittsburgh, Pa.
Techniflex Corp., Port Jervis, N. Y.
Wabash Mfg. Co., Chicago, Ill.

DETECTORS, FLUE GAS

Maxwell, Inc., Denver, Colo.

DETECTORS, LEAK, REFRIGERANT

Gates & Co., Inc., George W., Franklin Sq., L. I., N. Y.
Highside Chemicals Co., Clifton, N. J.
Justrite Mfg. Co., Chicago, Ill.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Vacuum-Electronic Engineering Co., New Hyde Park, N. Y.
Velocity-Power Tool Co., Pittsburgh, Pa.

DIES

See Machines, Sheet Metal Working, Presses (and Dies)

DIFFUSERS, AIR, BASEBOARD

Air Control Products, Inc., Coopersville, Mich.
Auer Register Co., Cleveland, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
General Automatic Products Corp., Baltimore, Md.
Gerwin Industries, Thermo-Base Div., Michigan City, Ind.
Hart & Cooley Mfg. Co., Holland, Mich.
Lima Register Co., Lima, Ohio
Midco Register Corp., St. Paul, Minn.
Patco Mfg. Co., Philadelphia, Pa.
Premier Furnace Co., Dowagiac, Mich.
Radair Mfg. Co., Melrose, Mass.
Radiant-Aire Corp., Michigan City, Ind.
Roberts Co., S. R., Marshall, Mich.
Rock Island Register Co., Rock Island, Ill.
Standard Stamping & Perforating Co., Chicago, Ill.
Sundstrom Pressed Steel, Chicago, Ill.
Thermo-Products, Inc., North Judson, Ind.
Titus, Inc., Waterloo, Ia.
Titus Mfg. Corp., Waterloo, Iowa
U. S. Register Co., Battle Creek, Mich.
Vectaire Mfg. Co., Melrose, Mass.
York-Shipley, Inc., York, Pa.

DIFFUSERS, AIR, CEILING

A & A Register Co., Cleveland, Ohio.
Air Control Products, Inc., Coopersville, Mich.
Air Devices, Inc., New York, N. Y.
Airfan Engineering Co., Los Angeles, Calif.
Aladdin Heating Corp., Oakland, Calif.
Anemostat Corp. of America, New York, N. Y.
Ashburn Supply Co., Culver City, Calif.
Barber-Colman Co., Rockford, Ill.
Carnes Co., W. R., Verona, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
Connor Engineering Corp., Danbury, Conn.
Demuth & Sons, Inc., Charles, Mineola, L. I., N. Y.
Hart & Cooley Mfg. Co., Holland, Mich.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Pyle-National Co., Multi-Vent Div., Chicago, Ill. (Low velocity discharge)
Titus, Inc., Waterloo, Iowa.
Titus Mfg. Corp., Waterloo, Iowa.
Trane Co., LaCrosse, Wis.
Tuttle & Bailey, Inc., New Britain, Conn.
Universal Diffuser Corp., New York, N. Y.
U. S. Register Co., Battle Creek, Mich.
Wilster, Inc., Cleveland, Ohio.

DIFFUSERS, AIR, FLOOR

A & A Register Co., Cleveland, O.
A-J Mfg. Co., Kansas City, Mo.
Air Control Products, Inc., Coopersville, Mich.
Auer Register Co., Cleveland, O.
Char-Gale Mfg. Co., Minneapolis, Minn.
Hart & Cooley Mfg. Co., Holland, Mich.
Lima Register Co., Lima, O.
Midco Register Corp., St. Paul, Minn.
Rock Island Register Co., Rock Island, Ill.

DIFFUSERS, AIR, LIGHTING FIXTURE COMBINATION

Barber-Colman Co., Rockford, Ill.
Connor Engineering Corp., Danbury, Conn.
Universal Diffuser Corp., New York, N. Y.

DIFFUSERS, AIR, WALL

A & A Register Co., Cleveland, O.
A-J Mfg. Co., Kansas City, Mo.
Air Control Products, Inc., Coopersville, Mich.
Anemostat Corp. of America, New York, N. Y.
Auer Register Co., Cleveland, O.
Barber-Colman Co., Rockford, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Hart & Cooley Mfg. Co., Holland, Mich.
Midco Register Corp., St. Paul, Minn.
Radiant-Aire Corp., Michigan City, Ind.
Rock Island Register Co., Rock Island, Ill.
Titus Mfg. Corp., Waterloo, Ia.
U. S. Register Co., Battle Creek, Mich.
Universal Diffuser Corp., New York, N. Y.
Waterloo Register Co., Inc., Waterloo, Ia.

DOORS, SAFETY, FOR FURNACES

Leisur-Maid Mfg. Corp., Grand Rapids, Mich.
Liberty Combustion Corp., Syracuse, N. Y.

DOWNSPOUTING AND FITTINGS

See Pipe, Conductor; Fittings and Accessories, Conductor; Fittings and Accessories, Gutter

DRAFT BOOSTERS, MECHANICAL

For Increasing Chimney Capacity

Breese Burners, Santa Fe, N. M.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Quickdraft Co., Div. Hall's Safe Co., Inc., Canton, O.

DRAFT DIVERTERS, GAS HEATER

Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Banner Burner Co., Youngstown, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Cleveland Heater Co., Cleveland, Ohio.
Cramer Mfg. Co., Canton, Ohio. (Horizontal)
Excelsior Steel Furnace Co., Chicago, Ill.
Famous Furnace Co., Cleveland, Ohio.
Finger, Joe, Cleveland, Ohio. (Hoods)
H&H Research Co., Detroit, Mich. (Electric reciprocating for filing, sawing, scraping, etc.)
Hotstream Heater Co., Cleveland, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maysteel Products, Inc., Milwaukee, Wis.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Sure Comfort Furnace Co., Forest Park, Ill.
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
Waverly Heating Supply Co., Boston, Mass.
Wilder Mfg. Co., Niles, Ohio.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.

DRAFT GAUGES

See Gauges, Draft

DRAFT REGULATORS

See Regulators, Furnace Draft, Mechanical; Dampers, Draft, Barometric; Controls, Motors, Draft Damper

DRILLS, ELECTRIC AND PNEUMATIC, PORTABLE

Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic)
Albertson & Co., Inc., Sioux City, Iowa.
Black & Decker Mfg. Co., Towson, Md. (Electric, Portable)
Buffalo Forge Co., Buffalo, N. Y.
Chicago Pneumatic Tool Co., New York, N. Y.
Clark, Jr., Electric Co., Jas., Louisville, Ky.
Cummins Portable Tool Co., Chicago, Ill. (Electric)
Delta Power Tool Div., Rockwell Mfg. Co., Pittsburgh, Pa. (Electric)
Ingersoll-Rand Co., New York, N. Y. (Pneumatic)
Keller Tool Co., Grand Haven, Mich. (Pneumatic)
Mall Tool Co., Chicago, Ill. (Electric)
Millers Falls Co., Greenfield, Mass.
Milwaukee Electric Tool Corp., Milwaukee, Wis. (Elec.)
Portable Electric Tools, Inc., Chicago, Ill. (Electric)
Porter-Cable Machine Co., Syracuse, N. Y. (Electric)
Rotor Tool Co., Cleveland, Ohio. (Pneumatic & electric)
Skil Corporation, Chicago, Ill. (Electric & pneumatic)
Small Motors, Inc., Chicago, Ill. (Electric)
Snap-on Tools Corp., Kenosha, Wis.
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
Stow Mfg. Co., Binghamton, N. Y. (Electric-flexible shaft)
Syntron Co., Homer City, Pa. (Electric)
Tempo Products Co., Cleveland, Ohio. (Powder operated)
Thor Power Tool Co., Aurora, Ill. (Electric & Pneumatic)
Time Saver Tools, Inc., Mundelein, Ill. (Electric)
U.S. Electrical Tool Div., Emerson Electric Co., St. Louis, Mo. (Electric)
Wodack Electric Tool Corp., Chicago, Ill. (Electric)
York Electric & Machine Co., York, Pa. (Electric)

DRIVE CLEATS

See Connectors, Metal

DRYERS, FURNACE TYPE

Campbell Heating Co., Des Moines, Iowa.
Jackson & Church Co., Saginaw, Mich.
Link-Belt Co., Chicago, Ill.

DUCT AND DUCT FITTINGS, PREFABRICATED, METAL

Acer & Whedon, Inc., Medina, N. Y.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Brighton, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Beckett & Co., Thomas, Dallas, Texas.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Chandler Co., Cedar Rapids, Iowa.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Furnace Supply Co., Chicago, Ill.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Coleman Co., Inc., Wichita, Kans.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Corbman Bros., Inc., Philadelphia, Pa.
Cross & Currier Mfg. Co., Inc., Claremont, N. H.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Diamond Mfg. Co., Wyoming, Pa.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Flexonics Corp., Chicago, Ill.
Gary Steel Products Co., Gary, Ind.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Henry Furnace Co., Medina, Ohio.
Hexdall Co., A. M., Morris, Ill.
Howes-Woods Co., Cambridge, Mass.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., Pittsburgh, Pa.
Keith Furnace Co., Des Moines, Iowa.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lumm Co., A. H., Toledo, O.
Made-Rite Co., Inc., Newport, Ky.
Marshall Furnace Co., Marshall, Mich.
Metal Fabricators, Inc., Charlotte, N. C.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Ohio Valley Hardware & Roofing Co., Evansville, Ind.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry, Inc., Indianapolis, Ind.
Perfection Furnace Pipe Co., Toledo, Ohio.
Ralph Manufacturing Co., Inc., Wadsworth, Ohio
Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
Round Oak Co., Inc., Dowagiac, Mich.
St. Clair Metal Products Co., Cleveland, O.
Schecter Bros. Co., Philadelphia, Pa.
Sioux Steel Co., Sioux Falls, S. D.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Inc., Louisville, Ky.
Superior Coated Specialties, Berwyn, Ill.
Superior Metal Fabricating Co., Niles, O.
Superior Safety Furnace Pipe Co., Detroit, Mich.
Swett Bros., Springfield, Mass.

Thor Metal Products Co., Inc., Syracuse, N. Y.
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United Industries, Madison, Wis. (Duct hangers for precast concrete joists only)
United States Register Co., Battle Creek, Mich.
Viking Mfg. Corp., Cleveland, Ohio. (Aluminum)
Waverly Heating Supply Co., Boston, Mass.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

DUCT AND DUCT FITTINGS, PREFABRICATED, NON-METALLIC

Airfloor of America, Culver City, Calif.
American Agile Corp., Bedford, Ohio. (Plastic)
Cannelton Sewer Pipe Co., RadianTile Div., Cannelton, Ind. (clay)
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Coward-Eastman Co., Philadelphia, Pa. (Plastic)
duPont de Nemours & Co., Inc., E. I., Wilmington, Del. (Rubberized tubing).
Flexible Tubing Corp., Guilford, Conn. (Fabric)
Harvey-Whipple, Inc., Springfield, Mass.
Haveg Corp., Newark, Del. (Plastic)
Heil Process Equipment Corp., Cleveland, O.
Johns-Manville, New York, N. Y.
Lumm Co., A. H., Toledo, Ohio. (Asbestos cement board)
Price Bros., Flexicore Div., Dayton, Ohio. (Concrete)
Sall Mountain Co., Hamilton, O. (Asbestos)
Sonoco Products Co., Construction Products Div., Hartsville, S. C. (Fiber)
United States Rubber Co., New York, N. Y.
Van Dorn Iron Works, Cleveland, O.

DUCT CONNECTORS

See Connectors, Duct, Flexible

DUCT FITTING ACCESSORIES, BLOW PIPE

Elbows, Flanges, Hangers, Hoods and Sweeps, Joints, Rings, Tubing

Barcafer Mfg. Co., Salina, Kans.
Carolina Blower Co., Inc., Greensboro, N. C.
Chicago Metal Mfg. Co., Chicago, Ill.
Day Co., Minneapolis, Minn.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kindt-Collins Co., Cleveland, Ohio.
Kirk & Blum Mfg. Co., Cincinnati, Ohio. (Adjustable bluffing hoods).
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyman Co., H. B., Southampton, Mass.
National Metal Fabricators, Chicago, Ill.
Newcomb-Detroit Co., Detroit, Mich.
Northern Blower Co., Cleveland, Ohio.
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Roofing & Supply Co., Chattanooga, Tenn.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Western Blower Co., Seattle, Wash.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.
Young & Bertke Co., Cincinnati, Ohio.

DUCT FITTING ACCESSORIES, CONDUCTOR

Elbows, Heads, Hooks, Shoes, Straps, etc.

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala.
American Metal Products, Los Angeles, Calif.
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cincinnati Elbow Co., Cincinnati, Ohio.
T. F. Crary, Middleport, Ohio. (Cut offs)
Dieckmann Co., Ferdinand, Cincinnati, Ohio.
Downs-Smith Brass & Copper Co., New York City, N. Y.
Duro-Dyne Corp., Hempstead, L.I., N.Y.
Franck & Fric, Cleveland, Ohio.
Galvan Mfg. Co., New Albany, Ind. (Cutoffs, elbows, etc.)
Gerhardt Co., Inc., Geo. T., Sausalito, Calif.
Gray Metal Products, Inc., Rochester, N. Y.
Heil Process Equipment Corp., Cleveland, O.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Levow, David, New York, N. Y.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Maysteel Products, Inc., Milwaukee, Wis.
Miller & Doing, Brooklyn, N. Y.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio.
Reynolds Metals Co., Louisville, Ky.
Rival Strap Corp., New York, N. Y. (Ornamental conductor straps).
Roofing & Supply Co., Chattanooga, Tenn.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
St. Paul Corrugating Co., St. Paul, Minn.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. Dak.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Heads)
Wheeling Corrugating Co., Wheeling, W. Va.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

DUCT FITTING ACCESSORIES, FURNACE PIPE

Angles, Boots, Heads, Joints, Offsets, Tees, etc.

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa.
Aireflo Furnace Pipe Co., Brighton, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Metal Products, Los Angeles, Calif.
Armstrong Furnace Co., Columbus, Ohio.
Ashburn Supply Co., Culver City, Calif.
Beckett & Co., Thomas, Dallas, Texas.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieler & Son, Long Island City, N. Y. (Adjustable elbows)
Braden Mfg. Co., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Eisbach, Albert N., Dubuque, Iowa. (Elbows)
Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Iowa.
Heil Process Equipment Corp., Cleveland, O.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg. Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich. (Elbows)
Jettronaire, Inc., Pittsburgh, Pa.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Keith Furnace Co., Des Moines, Iowa.
Krauser-Boyd, Inc., North Tonawanda, N. Y. (Angles, elbows, boots, heads, etc.)
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Elbows)
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lyman Co., H. B., Southampton, Mass.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metal Fabricators, Inc., Charlotte, N. C.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F, Peoria, Ill.

Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perfection Furnace Pipe Co., Toledo, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quality Heating Supply Co., Cincinnati, O.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Inc., Kankakee, Ill.
Rock Island Register Co., Rock Island, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc., Dowagiac, Mich.
Schecter Bros. Co., Philadelphia, Pa.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Specialty Div., Follansbee Steel Corp., Follansbee, W. Va.
Sioux Steel Co., Sioux Falls, S. D.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Thermo-Products, Inc., North Judson, Ind.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Angles, boots, heads, joints & elbows)
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United States Register Co., Battle Creek, Mich. (Elbows & angles)
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheelock Co., Geo. F., Birmingham, Ala.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

DUCT FITTING HARDWARE

See Hardware, Duct Fitting

DUCT INSULATION

See Insulation, Duct

DUCT TURNING VANES

See Vanes, Duct Turning

DUST COLLECTORS

See Collectors, Blow Pipe

EAVES TROUGH AND FITTINGS

See Gutters; Fittings and Accessories, Gutter

ELBOW MACHINES

See Machines, Elbow

ELECTRIC AIR CLEANERS

See Filters, Air, Electrostatic

ELECTRIC MOTORS

See Motors, Electric

ELECTRIC WATER HEATERS

See Heaters, Domestic, Storage Type

ELECTRIC WELDERS

See Welders

EVAPORATIVE COOLERS

See Units, Air Conditioning, Central Plant, Evaporative Type. Also Units, Air Conditioning, Room Type, Evaporative

EXCHANGERS, HEAT, REFRIGERANT SUCTION LINE

Acme Industries, Inc., Jackson, Mich.
Brown Fintube Co., The, Elyria, O.
Doyle & Roth Mfg. Co., Brooklyn, N. Y.
Gerstein & Cooper Co., Inc., South Boston, Mass.
Heat-X-Changer Co., Inc., The, Brewster, N. Y.
Kenmore Machine Products, Inc., Lyons, N. Y.
Kramer Trenton Co., Trenton, N. J.
Mueller Brass Co., Port Huron, Mich.
Superior Valve and Fittings Co., Pittsburgh, Pa.
Techniflex Corp., Port Jervis, N. Y.
Temprite Products Corp., Birmingham, Mich.
Trane Co., LaCrosse, Wis.
Wabash Mfg. Co., Chicago, Ill.

EXPANSION BOLTS

See Bolts, Expansion

FACES, RETURN AIR, METAL

A & A Register Co., Cleveland , Ohio.
A-J Mfg. Co., Kansas City, Mo.
Air Control Products, Inc., Coopersville, Mich.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
Controlair Mfg. Co., Los Angeles, Calif.
Diamond Mfg. Co., Wyoming, Pa.
Hart & Cooley Mfg. Co., Holland, Mich.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Lima Register Co., Lima, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Midco Register Corp., St. Paul, Minn.
Mundt & Sons, Charles, Jersey City, N. J.
Peacard Co., M. A., Boston, Mass.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Rock Island Register Co., Rock Island, Ill.
Standard Stamping & Perforating Co., Chicago, Ill.
Stewart Mfg. Co., Cedar Grove, N. J.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.

FACES, RETURN AIR, WOOD

Marsh Lumber Co., Inc., Dover, Ohio.

FAN CONTROLS

See Controls, Fan

FAN HOUSINGS

See Housings, Blower and Fan

FANS, PROPELLER TYPE, AXIAL FLOW

Aerovent Fan Co., Piqua, Ohio.
American Blower Corp., Detroit, Mich.
Ammerman Co., C. L., Minneapolis, Minn.
Bertram Co., Harvey P., Cincinnati, Ohio.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Century Fan & Ventilator Co., Stamford, Conn.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
General Blower Co., Morton Grove, Ill.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Holden Fan Co., Detroit, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
Martin Fan & Blower Co., Chicago, Ill.
M & E Mfg. Co., Indianapolis, Ind.
Moore Co., Marceline, Mo.
Robbins & Myers, Inc., Springfield, Ohio.
South Bend Air Products, Inc., South Bend, Ind.
Sutton Corp., O. A., Wichita, Kans.
Vernco Corp., Columbus, Ind.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.
Zink Co., John, Tulsa, Okla.

FANS, PROPELLER TYPE, BOOSTER, COLD AIR RETURN

Advance Aluminum Castings Corp., Chicago, Ill.
Bern's Mfg. Co., Chicago, Ill.
Brumme Mfg. Co., Bloomington, Ill.
Cary Mfg. Co., Waupaca, Wis.
Dana Fan & Blower Corp., Cincinnati, Ohio.
General Blower Co., Inc., Philadelphia, Pa.
International Engineering, Inc., Dayton, Ohio.
Joy Mfg. Co., Pittsburgh, Pa.
McLarty Systems, Battle Creek, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Silent Sioux Corp., Orange City, Iowa.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Western Engineering & Mfg. Co., Venice, Calif.

FANS, PROPELLER TYPE, BOOSTER, ONE-PIPE WARM AIR

Brumme Mfg. Co., Bloomington, Ill.
Champion Blower & Forge Co., Lancaster, Pa.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dual-Air Fan Corp., South Elgin, Ill.
McLarty Systems, Battle Creek, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mauer Engineering, Evanston, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Victor Electric Products, Inc., Cincinnati, Ohio.
Western Engineering & Mfg. Co., Venice, Calif.

FANS, PROPELLER TYPE, EXHAUSTERS

Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Aerovent Fan Co., Inc., Piqua, O.
Airfan Engineering Co., Los Angeles, Calif.
American Blower Corp., Detroit, Mich.
Ammerman Co., C. L., Minneapolis, Minn.
Babbin, Inc., New York, N. Y. (Mill)
Bertram Co., Harvey P., Cincinnati, Ohio.
Baldor Electric Co., St. Louis, Mo.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N.Y.
Clarage Fan Co., Kalamazoo, Mich.
Cook Co., Loren, Berea, Ohio.
Coppus Engineering Corp., Worcester, Mass.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Day Co., Minneapolis, Minn.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Despatch Oven Co., Minneapolis, Minn.
Diehl Mfg. Co., Somerville, N. J.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Filkins, Inc., Edward, Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
General Blower Co., Morton Grove, Ill.
Holden Fan Co., Detroit, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, O.
Jenn Air Products Co., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Martin Fan & Blower Co., Chicago, Ill.
McLarty Systems, Battle Creek, Mich.
Moore Co., Marceline, Mo.
Mountain States Equipment Co., Denver, Colo.
National Engineering & Mfg. Co., Sedalia, Mo.
National Gas Equipment Co., Inc., Terrell, Texas.
Peerless Electric Co., Warren, O.
Reed Unit-Fans, Inc., New Orleans, La.
Robbins & Myers, Inc., Springfield, O.
Ruemelin Mfg. Co., Milwaukee, Wis.
Signal Electric Mfg. Co., Menominee, Mich.
Sutton Corp., O. A., Wichita, Kans.
Torit Mfg. Co., St. Paul, Minn.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., The, La Crosse, Wis.
Western Engineering & Mfg. Co., Venice, Calif.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Zink Co., John, Tulsa, Okla.

FANS, PROPELLER TYPE, FURNACE

American Blower Corp., Detroit, Mich.
Brumme Mfg. Co., Bloomington, Ill.
Corlett-Turner Co., Chicago, Ill.
Dana Fan & Blower Corp., Cincinnati, Ohio.
De Bothezat Fan Div., American Machine & Metals, Inc., East Moline, Ill.
Dual-Air Fan Corp., South Elgin, Ill.
Joy Mfg. Co., Pittsburgh, Pa.
Martin Fan & Blower Co., Chicago, Ill.
McLarty Systems, Battle Creek, Mich.
Peerless Electric Co., Warren, Ohio.

FANS, PROPELLER TYPE, KITCHEN EXHAUST

American Blower Corp., Detroit, Mich.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Bern's Mfg. Co., Chicago, Ill.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Broan Mfg. Co., Inc., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Commercialaire, Inc., Brooklyn, N. Y.
Cook Co., Loren, Berea, O.
Crane Co., Chicago, Ill.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fasco Industries, Inc., Rochester, N. Y.
Filkins, Inc., Edward, Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
Jenn Air Products Co., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Kool Air Engineering Co., San Bernardino, Calif.
Lau Blower Co., Dayton, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Marvin Mfg. Co., Los Angeles, Calif.
McLarty Systems, Battle Creek, Mich.
Meyer Mfg. Co., Detroit, Mich.
Myers Electric Co., Inc., Pittsburgh, Pa.
National Appliance Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
NuTone, Inc., Cincinnati, O.
Peerless Electric Co., Warren, Ohio.
Pryne & Co., Inc., Pomona, Calif.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Co., Oakland, Calif.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Stewart Mfg. Co., Indianapolis, Ind.
Sutton Corp., O. A., Wichita, Kans.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Universal Blower Co., Birmingham, Mich.
Vernco Corp., Columbus, Ind.
West Wind Corp., Seattle, Wash.
Western Blower Co., Seattle, Wash.

FANS, PROPELLER TYPE, NIGHT AIR COOLING

Air Controls, Inc., Cleveland, Ohio.
Air Equipment Co., Inc., Chicago, Ill.
Airmaster Corp., Chicago, Ill.
Allen Ventilator Div. Production Planning Co., Rochester, Mich
American Blower Corp., Detroit, Mich.
American Coolair Corp., Jacksonville, Fla.
Arlington Electric Co., St. Louis, Mo.
Baldor Electric Co., St. Louis, Mo.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Bern's Mfg. Co., Chicago, Ill.
Bishop & Babcock Mfg. Co., Cleveland, O.
Buffalo Forge Co., Buffalo, N. Y.
C & H Air Conditioning Fan Co., Inc., Atlanta, Ga.
Carey Mfg. Co., Philip, Cincinnati, Ohio.

Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cirklair Products Div., Folsom Co., Inc., Dallas, Texas.
Climax Machinery Co., Indianapolis, Ind.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dearborn Stove Co., Dallas, Texas.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fresh Air Circulator Co., Houston, Texas.
Fresh'nd-Aire Co., Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
General Blower Co., Inc., Philadelphia, Pa.
General Blower Co., Morton Grove, Ill.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Oil Burner Co., St. Louis, Mo.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
King Co., Owatonna, Minn.
Kloppenborg Aluminum Foundry, Davenport, Ia.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Lonergan Mfg. Co., Albion, Mich.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Murray Co. of Texas, Inc., Dallas, Tex.
National Engineering & Mfg. Co., Sedalia, Mo.
National Gas Equipment Co., Inc., Terrell, Texas.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Phelps Mfg. Co., Little Rock, Ark.
Reed Unit-Fans, Inc., New Orleans, La.
Robbins & Myers, Inc., Springfield, Ohio.
Schwitzer-Cummins Co., Indianapolis, Ind.
Seco-Lite Mfg. Co., St. Louis, Mo.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Stonewall Co., Chicago, Ill.
Sutton Corp., O. A., Wichita, Kans.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Vernco Corp., Columbus, Ind.
Victor Electric Products, Inc., Cincinnati, Ohio.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Western Blower Co., Seattle, Wash.
Wind-Way Ventilator Co., New Orleans, La.

FANS, PROPELLER TYPE, VENTILATING SYSTEM

Capacity 4000 cfm up for connection to ductwork

Acme Equipment Co., Muskogee, Okla.
Aerovent Fan Co., Piqua, Ohio.
Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Airmaster Corp., Chicago, Ill.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Coolair Corp., Jacksonville, Fla.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Arlington Electric Co., St. Louis, Mo.
Babbin, Inc., New York, N. Y.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Bern's Mfg. Co., Chicago, Ill.
Bertram Co., Harvey P., Cincinnati, Ohio.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Bishop Co., R. H., Champaign, Ill.
Buffalo Forge Co., Buffalo, N. Y.
C. & H. Air Conditioning Fan Co., Inc., Atlanta, Ga.
Campbell Co., E. K., Kansas City, Mo.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Century Fan & Ventilator Co., Stamford, Conn.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas.
Clarage Fan Co., Kalamazoo, Mich.
Climax Machinery Co., Indianapolis, Ind.
Commercialaire, Inc., Brooklyn, N. Y.
Cook Co., Loren, Berea, O.
Coppus Engineering Corp., Worcester, Mass.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Dearborn Stove Co., Dallas, Tex.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
De Vilbiss Co., Toledo, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Emerson Electric Mfg. Co., St. Louis, Mo.
Frigid, Inc., Brooklyn, N. Y.
Fresh'nd-Aire Co., Chicago, Ill.
General Blower Co., Morton Grove, Ill.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua, Ohio.
Holden Fan Co., Detroit, Mich.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
International Oil Burner Co., St. Louis, Mo.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Kloppenborg Aluminum Foundry, Davenport, Iowa.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Martin Fan & Blower Co., Chicago, Ill.
M & E Mfg. Co., Indianapolis, Ind.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Moore Co., Marceline, Mo.
Mountain States Equipment Co., Denver, Colo.
Murray Co. of Texas, Inc., Dallas, Texas.
Myers Electric Co., Inc., Pittsburgh, Pa.
National Gas Equipment Co., Inc., Terrell, Texas.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
New York Blower Co., Chicago, Ill.
Palmer Mfg. Corp., Phoenix, Ariz.
Peerless Electric Co., Warren, Ohio.
Reynolds Electric Co., River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Schwitzer-Cummins Co., Indianapolis, Ind.
Seco-Lite Mfg. Co., St. Louis, Mo.
Skinner Heating & Ventilating Co., Inc., St. Louis, Mo.
South Bend Air Products, Inc., South Bend, Ind.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., LaCrosse, Wis.
Truflo Fan Co., Harmony, Pa.
Uno Ventilator Co., Malden, Mass.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Western Blower Co., Seattle, Wash.
Western Engineering & Mfg. Co., Venice, Calif.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass
Wind-Way Fan & Ventilator Co., New Orleans, La.
Wing Mfg. Co., L. J., Linden, N.J.

FASTENINGS, INSULATION

Miracle Adhesives Corp., New York, N. Y.
Stic-Klip Mfg. Co., Inc., Cambridge, Mass.

FASTENINGS, SHEET METAL

Camloc Fastener Corp., Paramus, N. J.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cuyahoga Spring Co., Cleveland, Ohio.
Diamond Expansion Bolt Co., Inc., Garwood, N. J.
Fabricated Products Co., West Newton, Pa.
Gerrard & Co., A. J., Melrose Park, Ill.
Shakeproof Div., Illinois Tool Wks., Chicago, Ill.
Southco Div., South Chester Corp., Philadelphia, Pa.
Star Expansion Bolt Co., New York, N. Y.
Star Stainless Screw Co., Paterson, N. J.
Tinnerman Products, Inc., Cleveland, Ohio.
United-Carr Fastener Corp., Cambridge, Mass. (Studs, receptacles, clips, special nuts, etc.).
Velocity-Power Tool Co., Pittsburgh, Pa.

FELT, ROOFING

Barber Co., Inc., Philadelphia, Pa.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y.
Carey Mfg. Co., Philip, Cincinnati, Ohio.

Celotex Corp., Chicago, Ill.
Certain-teed Products Corp., Ardmore, Pa.
Detroit Steel Products Co., Detroit, Mich.
Flintkote Co., New York, N. Y.
Globe Roofing Products Co., Inc., Whiting, Ind.
Johns-Manville, New York, N. Y.
Koppers Co., Inc., Pittsburgh, Pa. (Tarred)
Lehon Co., Chicago, Ill.
Lexsuco, Inc., Cleveland, Ohio.
Meadows, Inc., W. R., Elgin, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Ohio Paper Co., Miamisburg, Ohio.
Owens-Corning Fiberglas Corp., Toledo, Ohio.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Ruberoid Co., New York, N. Y.

FILTERS, AIR, AUTOMATIC

Air-Maze Corp., Cleveland, O.
Air & Refrigeration Corp., New York, N. Y.
Air Stream Filter Corp., St. Louis, Mo.
American Air Filter Co., Inc., Louisville, Ky.
Continental Air Filters, Inc., Louisville, Ky.
Day Co., Minneapolis, Minn.
Dollinger Corp., Rochester, N. Y.
Farr Co., Los Angeles, Calif.

FILTERS, AIR, CLEANABLE

Air Devices, Inc., New York, N. Y. (Steel wire mesh).
Air & Refrigeration Corp., New York, N. Y. (Fiberglas)
Air Filter Corp., Milwaukee, Wis. (Wire cloth)
Air-Maze Corp., Cleveland, Ohio. (Metal wire baffles)
Air Stream Filter Corp., St. Louis, Mo.
Aluminum Wool Div., Carey Electronic Engineering Co., Springfield, O.
American Air Filter Co., Inc., Louisville, Ky. (Glass fibers)
Bard Mfg. Co., Bryan, O. (Aluminum)
Besser Metal Products Corp., Charlotte, N. C. (Plastic)
Continental Air Filters, Inc., Louisville, Ky. (Steel & aluminum)
Coppus Engineering Corp., Worcester, Mass. (Felt).
Dollinger Corp., Rochester, N. Y. (Feltex, Glastex, heat resistant cotton).
Drico Industrial Corp., New York, N. Y. (Felt)
Farr Co., Los Angeles, Calif. (Metal)
Goodyear Tire & Rubber Co., Akron, Ohio.
Kauffman Air Conditioning Corp., St. Louis, Mo. (Aluminum)
Mine Safety Appliance Co., Pittsburgh, Pa.
Research Products Corp., Madison, Wis. (Metal).
Smith Filter Corp., Moline, Ill. (Aluminum)
Somers, Inc., H. J., Detroit, Mich. (Hair & glass)
York Corp., York, Pa.

FILTERS, AIR, ELECTROSTATIC

Air-Maze Corp., Cleveland, Ohio.
American Air Filter Co., Inc., Louisville, Ky.
Besser Metal Products Corp., Charlotte, N. C.
Dollinger Corp., Rochester, N. Y.
Small Motors, Inc., Chicago, Ill.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Trion, Inc., McKees Rocks, Pa.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

FILTERS, AIR, GREASE, FOR RANGE HOODS

Air Devices, Inc., New York, N. Y.
Air Filter Corp., Milwaukee, Wis.
Air-Maze Corp., Cleveland, Ohio.
American Air Filter Co., Inc., Louisville, Ky.
Continental Air Filters, Inc., Louisville 1, Ky.
Dollinger Corp., Rochester, N. Y.
Farr Co., Los Angeles, Calif.
Research Products Corp., Madison, Wis.
Smith Filter Corp., Moline, Ill.

FILTERS, AIR, THROWAWAY

Air-Maze Corp., Cleveland, O.
Airgard Mfg. Co., Chicago, Ill.
American Air Filter Co., Inc., Louisville, Ky.
Beck Mfg. Co., New Albany, Ind.
Cambridge Corp., Syracuse, N.Y.
Drico Industrial Corp., New York, N. Y. (Glass)
Glasfloss, New York, N. Y.
Harvey, Inc., Sid, Valley Stream, N. Y.
Lennox Furnace Co., Marshalltown, Ia.
Master Products Co., Inc., Chicago, Ill.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Fiberglas).
Research Products Corp., Madison, Wis.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Wilson & Co., Inc., Chicago, Ill. (Animal Hair).
York Corp., York, Pa.

FILTERS, FUEL OIL

A-P Controls Corp., Milwaukee, Wis.
Barclay, Inc., Robt., Chicago, Ill.
Commercial Filters Corp., Melrose, Mass.
Cuno Engineering Corp., Meriden, Conn.
Eclipse Fuel Engineering Co., Rockford, Ill.
Eddington Metal Specialty Co., Eddington, Pa.
Fram Corp., Providence, R. I.
General Filters, Inc., Novi, Mich.
Harvey, Inc., Sid, Valley Stream, N.Y.
Kraissl Co., Inc., Hackensack, N. J.
Marquart Mfg. Co., Oakland, Calif.
Morse-Smith-Morse Co., The, Watertown, Mass.
Purolator Products, Inc., Rahway, N. J.
Rega Mfg. Co., Rochester, N. Y.
Sparkler Mfg. Co., Mundelein, Ill.
Tool Industries, Inc., Detroit, Mich.
W.G.B. Oil Clarifier, Inc., Kingston, N. Y.

FILTERS, ODOR

See Adsorbers, Odor

FIRE BRICK

See Refractories

FIREPOTS

See Repairs, Stove and Furnace

FITTINGS, COPPER TUBE, COMPRESSION AND FLARED

American Brass Co., New York, N. Y.
Barcafer Mfg. Co., Salina, Kans.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Commonwealth Brass Corp., Detroit, Mich.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Crane Co., Chicago, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Everhot Products Co., Chicago, Ill.
Fisher Brass Foundry, Los Angeles, Calif.
Hays Mfg. Co., Erie, Pa.
Imperial Brass Mfg. Co., Chicago, Ill.
Kerotest Mfg. Co., Pittsburgh, Pa.
Lincoln Brass Works, Detroit, Mich.
Madden Brass Products Co., Chicago, Ill.
Market Forge Co., Everett, Mass.
Mueller Brass Co., Port Huron, Mich.
Mueller Co., Decatur, Ill.
Northern Indiana Brass Co., Elkhart, Ind.
Oil Equipment Mfg. Co., New Haven, Conn.
Parker Appliance Co., Cleveland, Ohio.
Remco, Inc., Zelienople, Pa.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Weatherhead Co., Cleveland, Ohio.

FITTINGS, HUMIDIFIER, WATER LINE

American Brass Co., New York, N. Y.
Hays Mfg. Co., Erie, Pa.
Imperial Brass Mfg. Co., Chicago, Ill.
Lincoln Brass Works, Detroit, Mich.
McDonnell & Miller, Inc., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Mueller Brass Co., Port Huron, Mich.
Reichert Float & Mfg. Co., Toledo, Ohio.
Ross Sprinkler Co., Pasadena, Calif.
Skuttle Mfg. Co., Milford, Mich.

FLANGING MACHINES

See Machines, Flanging

FLASHINGS, ROOF, PREFABRICATED

American Metal Products, Los Angeles, Calif.
Alpha Metals, Inc., Jersey City, N. J.
American Steel Band Co., Pittsburgh, Pa.
Atchison Specialty Mfg. Co., Atchison, Kans.
Berger Mfg. Div., Republic Steel Co., Canton, Ohio.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Division Lead Co., Summit, Ill.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Figge Mfg. Co., Chicago, Ill.
Flemm Lead Co., Inc., Long Island City, N. Y.
Fry Reglet Corp., Bremerton, Wash.

Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis.
Johns-Manville, New York, N. Y.
Keystone Flashing Co., Philadelphia, Pa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Meadows, Inc., W. R., Elgin, Ill.
National Lead Co., New York City, N. Y.
New Delphos Mfg. Co., Delphos, Ohio.
Northwest Metal Products, Inc., Seattle, Wash.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Plasteel Products Co., Washington, Pa.
Quaker State Metals Co., Lancaster, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, O.
Revere Copper & Brass Inc., New York, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Schoedinger, F. O., Columbus, Ohio.
Simplex Mfg. Co., Fond du Lac, Wis.
Sisalkraft Co., Chicago, Ill.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wallace Co., William, Metalbestos Div., Belmont, Calif.

FLASHINGS, THROUGH-WALL, PREFABRICATED

American Brass Co., New York, N. Y.
American Steel Band Co., Pittsburgh, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Division Lead Co., Summit, Ill.
Figge Mfg. Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa.
Keystone Flashing Co., Philadelphia, Pa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
New Delphos Mfg. Co., Delphos, Ohio.
Perkinson, William J., Chicago, Ill.
Revere Copper and Brass Inc., New York, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Sisalkraft Co., Chicago, Ill.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Wasco Flashing Co., Cambridge, Mass.

FLOOR REGISTERS

See Diffusers, Air, Floor, also Grilles, Heating, Ventilating and Air Conditioning

FLUE GAS ANALYZERS

See Analyzers, CO, Portable

FLUX, ACID

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Carajon Chemical Co., Inc., Fremont, Mich.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
Klem Chemicals, Inc., Dearborn, Mich.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Neilson Chemical Co., Detroit, Mich.
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Ruby Chemical Co., Columbus, O.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.
United Wire & Supply Corp., Providence, R. I.
Wolfe-Kote Co., Sheboygan, Wis.

FLUX, ALUMINUM

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
Aluminum Co. of America, Pittsburgh, Pa.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
London Chemical Co., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Lead Co., New York, N. Y.
Potomac Mfg. Co., Philadelphia, Pa.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, BRASS

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Benson Co., Inc., Alex R., Hudson, N. Y.
Burnley Battery & Mfg. Co., North East, Pa.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Handy & Harman, New York, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Mueller Brass Co., Port Huron, Mich.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, CAST IRON

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Division Lead Co., Summit, Ill.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Farrelloy Co., Philadelphia, Pa.
Handy & Harman, New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Klem Chemicals, Inc., Dearborn, Mich.
Lenk Mfg. Co., Boston, Mass.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
London Chemical Co., Chicago, Ill.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Modern Engineering Co., St. Louis, Mo.
National Lead Co., New York, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.
United Wire & Supply Corp., Providence, R. I.

FLUX, COPPER

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Burnley Battery & Mfg. Co., North East, Pa.
Carajon Chemical Co., Inc., Fremont, Mich.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Division Lead Co., Summit, Ill.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Handy & Harman, New York, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
Industrial Service Laboratories, Milwaukee, Wis.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.
Klem Chemicals, Inc., Dearborn, Mich.
Lenk Mfg. Co., Boston, Mass.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Pfanstiehl Chemical Co., Waukegan, Ill.
Potomac Mfg. Co., Philadelphia, Pa.
Ruby Chemical Co., Columbus, O.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, GALVANIZED STEEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.

Allen Co., Inc., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Burnley Battery & Mfg. Co., North East, Pa.
Carajon Chemical Co., Inc., Fremont, Mich.
Division Lead Co., Summit, Ill.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Eutectic Welding Alloys Corp., Flushing, N. Y.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Handy & Harman, New York, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
Industrial Service Laboratories, Milwaukee, Wis.
Johnson Mfg Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.
Klem Chemicals, Inc., Dearborn, Mich.
Lake Chemical Co., Chicago, Ill.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
London Chemical Co., Chicago, Ill.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Pfanstiehl Chemical Co., Waukegan, Ill.
Potomac Mfg. Co., Philadelphia, Pa.
Ruby Chemical Co., Columbus, O.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Tinit Mfg. Co., Inc., Denver, Colo.
United Wire & Supply Corp., Providence, R. I.

FLUX, INCONEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Benson Co., Inc., Alex R., Hudson, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Handy & Harman, New York, N. Y.
International Nickel Co., Inc., New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, LEAD-TIN

Allen Co., Inc., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
American Chemical Paint Co., Ambler, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Burnley Battery & Mfg. Co., North East, Pa.
Carajon Chemical Co., Inc., Fremont, Mich.
Division Lead Co., Summit, Ill.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Eutectic Welding Alloys Corp., Flushing, N. Y.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
International Nickel Co., Inc., New York, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.
Klem Chemicals, Inc., Dearborn, Mich.
Lake Chemical Co., Chicago, Ill.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Reiner & Campbell Co., Inc., Newark, N. J.
Ruby Chemical Co., Columbus, O.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.
Tinit Mfg. Co., Inc., Denver, Colo.
Turco Products, Inc., Los Angeles, Calif.

FLUX, MONEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Handy & Harman, New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Ruby Chemical Co., Columbus, O.
Superior Flux & Mfg. Co., Cleveland, O.
Wolfe-Kote Co., Sheboygan, Wis.

FLUX, NICKEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., Inc., L. B., Chicago, Ill.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Handy & Harman, New York, N. Y.
International Nickel Co., Inc., New York, N. Y.
Johnson Mfg. Co., Inc., Mt Vernon, Ia.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, ROSIN

Allen Co., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Hercules Chemical Co., Inc., New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Klem Chemicals, Inc., Dearborn, Mich.
Lake Chemicals Co., Chicago, Ill.
London Chemical Co., Chicago, Ill.
National Cylinder Gas Co., Chicago, Ill.
National Lead Co., New York, N. Y.
Neilson Chemical Co., Detroit, Mich.
Paul-Lewis Laboratories, Inc., Milwaukee, Wis.
Pfanstiehl Chemical Co., Waukegan, Ill.
Ruby Chemical Co., Columbus, O.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.
United Wire & Supply Corp., Providence, R. I.

FLUX, SILVER

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
American Silver Co., Inc., Flushing, N. Y.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Benson Co., Inc., Alex R., Hudson, N. Y.
Division Lead Co., Summit, Ill.
Farrelloy Co., Philadelphia, Pa.
Handy & Harman, New York, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Lake Chemicals Co., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
National Lead Co., New York, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.

FLUX, STAINLESS STEEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
American Products Corp., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Benson Co., Inc., Alex R., Hudson, N. Y.
Carajon Chemical Co., Inc., Fremont, Mich.
Division Lead Co., Summit, Ill.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Farrelloy Co., Philadelphia, Pa.
Fusion Engineering, Cleveland, O.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Handy & Harman, New York, N. Y.
Industrial Service Laboratories, Milwaukee, Wis.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Klem Chemicals, Inc., Dearborn, Mich.

Lake Chemicals Co., Chicago, Ill.
Langsenkamp Co., F. H., Indianapolis, Ind.
Lenk Mfg. Co., Boston, Mass.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
London Chemical Co., Chicago, Ill.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
National Lead Co., New York, N. Y.
Potomac Mfg. Co., Philadelphia, Pa.
Ruby Chemical Co., Columbus, O.
Superior Flux & Mfg. Co., Cleveland, O.
Wolfe-Kote Co., Sheboygan, Wis.

FLUX, WELDING

Air Reduction Sales Co., New York, N.Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
Aluminum Co. of America, Pittsburgh, Pa.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Bastian-Blessing Co., Chicago, Ill.
Eutectic Welding Alloys Corp., Flushing, N.Y.
Farrelloy Co., Los Angeles, Calif.
International Nickel Co., Inc., New York, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Lincoln Electric Co., Cleveland, O.
Linde Air Products Co., New York, N. Y.
Marquette Mfg. Co., Minneapolis, Minn.
Midland Paint & Varnish Co., Cleveland, Ohio.
Modern Engineering Co., St. Louis, Mo.
National Cylinder Gas Co., Chicago, Ill.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Superior Flux & Mfg. Co., Cleveland, Ohio.
Tinit Mfg. Co., Inc., Denver, Colo.
United Wire & Supply Corp., Providence, R.I.

FLUX, ZINC

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Burnley Battery & Mfg. Co., North East, Pa.
Division Lead Co., Summit, Ill.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
National Lead Co., New York, N. Y.
Superior Flux & Mfg. Co., Cleveland, O.

FUEL OIL FILTERS

See Filters, Fuel Oil

FURNACE BLOWERS

See Blowers; Blower-Filter Units; Blower-Washer Units

FURNACE CEMENT

See Cement, Furnace

FURNACE CLEANERS

See Cleaners, Vacuum, Furnace

FURNACE PIPE

See Pipe and Fittings, Furnace

FURNACE PIPE FITTINGS AND ACCESSORIES

See Duct Fitting Accessories, Furnace Pipe

FURNACE REGULATORS

See Regulators, Furnace Draft, Mechanical; Controls

FURNACE REPAIRS

See Repairs, Stove and Furnace

FURNACES, FORCED WARM AIR, COUNTERFLOW, GAS FIRED, CAST IRON

For Perimeter Heating Systems in Slab or Crawl Space Construction

Heil Co., Milwaukee, Wis.
Myers & Bro. Co., F. E., Ashland, O.

FURNACES, FORCED WARM AIR, COUNTERFLOW, GAS FIRED, STEEL

For Perimeter Heating Systems in Slab or Crawl Space Construction

Advance Furnace Co., Wichita, Kans.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Bard Mfg. Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Campbell Heating Co., Des Moines, Ia.
Century Engineering Corp., Cedar Rapids, Ia.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Heating Div., Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
Farquhar Furnace Co., Wilmington, O.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Hall-Neal Furnace Co, Indianapolis, Ind.
Heating Equipment Mfg. Co., San Francisco, Calif.
Henry Furnace Co., Medina, O.
Hess Co., The, Chicago, Ill.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, O.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., The C. A., Elyria, O.
Patten Co., J. V, Sycamore, Ill.
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Perfection Stove Co., Cleveland, O.
Radiant-Aire Corp., Michigan City, Ind.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Schill Mfg. Co., Crestline, O.
Sequoia Mfg. Co., San Carlos, Calif.
Sheet Metal Mfg. Co., Youngstown, O.
Southwest Mfg. Co., Aurora, Mo.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, O.
Utility Appliance Corp., Los Angeles, Calif.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, O.
York-Shipley, Inc., York, Pa.

FURNACES, FORCED WARM AIR, COUNTERFLOW, OIL FIRED, CAST IRON

For Perimeter Heating Systems in Slab or Crawl Space Construction

Hess Co., The, Chicago, Ill.

FURNACES, FORCED WARM AIR, COUNTERFLOW, OIL FIRED, STEEL

For Perimeter Heating Systems in Slab or Crawl Space Construction

American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, O.
Bard Mfg. Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Besser Metal Products Corp., Charlotte, N. C.

Campbell Heating Co., Des Moines, Ia.
Century Engineering Corp., Cedar Rapids, Ia.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Heating Div., Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
DeSoto Oil Burner Corp., York, Pa.
Farquhar Furnace Co., Wilmington, O.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gillen Co., J. L., Detroit, Mich.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, O.
Herco Oil Burner Corp., Lancaster, Pa.
Home Furnace Co., Holland, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Mechanical Products Co., Seattle, Wash.
Montag Stove & Furnace Works, Portland, Ore.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., The C. A., Elyria, O.
Patten Co., J. V., Sycamore, Ill.
Perfection Stove Co., Cleveland, O.
Quiet Automatic Burner Corp., Newark, N. J.
Radiant-Aire Corp., Michigan City, Ind.
Ralph Mfg. Co., Inc., Wadsworth, O.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, O.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, O.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, O.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.

FURNACES, FORCED WARM AIR, ELECTRIC

Residential only

Electromode Corp., Rochester, N.Y.
Gray & Dudley Co., Nashville, Tenn. (basement, utility room)
Heating Assurance, Inc., Spokane, Wash.
Montag Stove & Furnace Works, Portland, Ore.

FURNACES, FORCED WARM AIR, HIGHBOY, COAL FIRED, STEEL

For Basement or Utility Room Installations

Campbell Heating Co., Des Moines, Ia.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Hall-Neal Furnace Co., Indianapolis, Ind.
Jackson & Church Co., Saginaw, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Montag Stove & Furnace Works, Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Souther Iron Co., E. E., St. Louis, Mo.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, CAST IRON

For Basement or Utility Room Installations

American Foundry & Furnace Co., Bloomington, Ill.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Henry Furnace Co., Medina, Ohio.
International Oil Burner Co., St. Louis, Mo.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Rybolt Heater Co., Ashland, Ohio.
Souther Iron Co., E. E., St. Louis, Mo.
Surface Combustion Corp., Toledo, Ohio.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL

For Basement or Utility Room Installations

Advance Furnace Co., Wichita, Kans.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Aladdin Heating Corp., San Leandro, Calif.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Ia.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Dalzen Mfg. Co., St. Clair, Mich.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Evans Products Co., Plymouth, Mich.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser & Johnston Co., San Francisco, Calif.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Golden Gate Sheet Metal Works, Oakland, Calif.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Equipment Mfg. Co., San Francisco, Calif.
Heating Specialties Co., Baltimore, Md.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Hunt Heater Corp., Nashville, Tenn.
Huwer Heating Corp., Milford, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., Pittsburgh, Pa.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Keith Furnace Co., Des Moines, Ia.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.

Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, O.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Round Oak Co. of Indiana, Dowagiac, Mich.
Royal Jet. Inc., Alhambra, Calif.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Schill Mfg. Co., Crestline, O.
Scott-Newcomb, Inc., Cleveland, O.
Sequoia Mfg. Co., San Carlos, Calif.
Sheet Metal Mfg. Co., Youngstown, O.
Souther Iron Co., E. E., St. Louis, Mo.
Southwest Mfg. Co., Aurora, Mo.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N.J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div. Cleveland Steel Products Corp., Cleveland, Ohio.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United States Radiator Corp., Detroit, Mich.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.
Zink Co., John, Tulsa, Okla.

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, STEEL

For Basement Installation or Utility Room Installations

Aeroil Products Co., Inc., South Hackensack, N. J.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
American Furnace Co., St. Louis, Mo.
Anchor Div. Stratton & Terstegge Co., New Albany, Ind.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, Ohio.
Benner-Nawman, Inc., Oakland, Calif.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Besser Metal Products Corp., Charlotte, N. C.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Ia.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
DeSoto Oil Burner Corp., York, Pa.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Ducane Heating Corp., Lincoln Park, N. J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Engineering Industries Co., Ltd., Toronto, Ont., Canada.
Enico Products, Detroit, Mich.
Evans Products Co., Plymouth, Mich.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., Detroit, Mich.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heating Specialties Co., Baltimore, Md.
Henry Furnace Co., Medina, Ohio.
Herco Oil Burner Corp., Lancaster, Pa.
Hess Co., Chicago, Ill.
Home Furnace Co., Holland, Mich.
Huwer Heating Corp., Milford, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., Pittsburgh, Pa.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Kleenair Furnace Co., Portland, Ore.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Iowa.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McPherson Furnace & Supply Co., Portland, Ore.
Mechanical Products Co., Seattle, Wash.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Northwest Metal Products, Inc., Seattle, Wash.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Paragon Oil Burner Corp., Brooklyn, N. Y.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Quiet Automatic Burner Corp., Newark, N. J.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Ralph Mfg. Co., Inc., Wadsworth, O.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, O.
Scott-Newcomb, Inc., Cleveland, O.
Silent Glow Oil Burner Co., Hartford, Conn.
Souther Iron Co., E. E., St. Louis, Mo.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.

Stokol Stoker Co., Inc., Dayton, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N.J.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waltham Oil Burner Co., E. Boston, Mass.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.

FURNACES, FORCED WARM AIR, HIGHBOY, COAL FIRED, STEEL

For Close Clearance (2 in. or under) Installations

Olsen Mfg. Co., The C. A., Elyria, O.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, CAST IRON

For Close Clearance (2 in. or under) Installations

General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Olsen Mfg. Co., The C. A., Elyria, O.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL

For Close Clearance (2 in. or under) Installations

Airtemp Div., Chrysler Corp., Dayton, O.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Bard Mfg. Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Dornback Furnace & Foundry Co., Cleveland, O.
Farquhar Furnace Co., Wilmington, O.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Fraser & Johnston Co., San Francisco, Calif.
Heating Equipment Mfg. Co., San Francisco, Calif.
Heil Co., Milwaukee, Wis.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, O.
Hunt Heater Corp., Nashville, Tenn.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Heater Co., Utica, N. Y.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Majestic Co., Inc., Huntington, Ind.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., The C. A., Elyria, O.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, O.
Petro Div., Iron Fireman Mfg. Co., Cleveland, O.
Pioneer Furnace Co., Los Angeles, Calif.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rasch Mfg. Corp., Kansas City, Mo.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Round Oak Co., Inc., Dowagiac, Mich.
Ryniker Steel Products Co., Billings, Mont.
Scott-Newcomb, Inc., Cleveland, O.
Sequoia Mfg. Co., San Carlos, Calif.
Southwest Mfg Co., Aurora, Mo.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sheet Metal Mfg. Co., Youngstown, O.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
U. S. Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, O.

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, CAST IRON

For Close Clearance (2 in. or under) Installations

Arcweld Mfg. Co., Inc., Seattle, Wash.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, STEEL

For Close Clearance (2 in. or under) Installations

Airtemp Div., Chrysler Corp., Dayton, O.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Bard Mfg. Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N. J.
Floral City Heater Co., Monroe, Mich.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, O.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Heater Co., Utica, N. Y.
Jackson & Church Co., Saginaw, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Majestic Co., Inc., Huntington, Ind.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., The C. A., Elyria, O.
Patten Co., J. V., Sycamore, Ill.
Perfection Stove Co., Cleveland, O.
Ralph Mfg. Co., Inc., Wadsworth, O.
Sandberg Mfg. Co., Portland, Ore.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, O.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, O.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, CAST IRON

For Zero Clearance Installations

Henry Furnace Co., Medina, O.
Scott-Newcomb, Inc., Cleveland, O.

FURNACES, FORCED WARM AIR, HIGHBOY, GAS FIRED, STEEL

For Zero Clearance Installations

Advance Furnace Co., Wichita, Kans.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, O.
Century Engineering Corp., Cedar Rapids, Ia.
Coleman Co., Inc., Wichita, Kans.
Crane Co., Chicago, Ill.
Dav & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Fraser & Johnston Co., San Francisco, Calif.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, O.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.

International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mission Appliance Corp., Hawthorne, Calif.
Norman Products Co., Inc., Columbus, O.
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Rheem Mfg. Co., New York, N. Y.
Round Oak Co., Inc., Dowagiac, Mich.
Royal Jet, Inc., Alhambra, Calif.
Ryniker Steel Products Co., Billings, Mont.
Sequoia Mfg. Co., San Carlos, Calif.
Smith Corp., A. O., Milwaukee, Wis.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Utility Appliance Corp., Los Angeles, Calif.
Zink Co., John, Tulsa, Okla.

FURNACES, FORCED WARM AIR, HIGHBOY, OIL FIRED, STEEL

For Zero Clearance Installations

Century Engineering Corp., Cedar Rapids, Ia.
Coleman Co., Inc., Wichita, Kans.
Henry Furnace Co., Medina, O.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Ralph Mfg. Co., Inc., Wadsworth, O.
Scott-Newcomb, Inc., Cleveland, O.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.

FURNACES, FORCED WARM AIR, HORIZONTAL, GAS FIRED, CAST IRON

For Attic, Crawl Space or Suspended Installations

Automatic Gas Equipment Co., Pittsburgh, Pa.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.

FURNACES, FORCED WARM AIR, HORIZONTAL, GAS FIRED, STEEL

For Attic, Crawl Space or Suspended Installations

Air Conditioning Engineering Co., Cambridge, Mass.
Allan Engineering Co., Dallas, Texas.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Bard Mfg. Co., Bryan, O.
Barwick Mfg. Corp., Wichita, Kans.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Century Engineering Corp., Cedar Rapids, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Cox Mfg. Co., Ridgeville, Ind.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Delta Heating Corp., Trenton, N. J.
Fraser & Johnston Co., San Francisco, Calif.
General Gas Light Co., Kalamazoo, Mich.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Green Colonial Furnace Co., Des Moines, Ia.
Hastings Air Cond. Co., Inc., Hastings, Nebr.
Heil Co., Milwaukee, Wis.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
International Heater Co., Utica, N. Y.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
McDonald Mfg. Co., A. Y., Dubuque, Ia.
Metzger Machine & Engineering Co., Milwaukee, Wis.
Meyer Furnace Company, Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., The C. A., Elyria, O.
OverHead Heaters, Inc., Detroit, Mich.
Palmer Mfg. Corp., Phoenix, Ariz.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Prat-Daniel Corp., South Norwalk, Conn.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rasch Mfg. Corp., Kansas City, Mo.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., New York, N. Y.
Rybolt Heater Co., Ashland, Ohio.
Sequoia Mfg. Co., San Carlos, Calif.
Sheet Metal Mfg. Co., Youngstown, O.
South Wind Div., Stewart-Warner Corp., Indianapalis, Ind.
Southwest Mfg. Co., Aurora, Mo.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Surface Combustion Corp., Toledo, Ohio.
Thatcher Furnace Co., Garwood, N. J.
Tjernlund Mfg. Co., St. Paul, Minn.
United States Radiator Corp., Detroit, Mich.
Utility Appliance Corp., Los Angeles, Calif.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heating Co., Cincinnati, Ohio

FURNACES, FORCED WARM AIR, HORIZONTAL, OIL FIRED, CAST IRON

For Attic, Crawl Space or Suspended Installations

Kaustine Furnace & Tank Corp., Perry, N. Y.

FURNACES, FORCED WARM AIR, HORIZONTAL, OIL FIRED, STEEL

For Attic, Crawl Space or Suspended Installations

Air Conditioning Engineering Co., Cambrdige, Mass.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, O.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Bard Mfg. Co., Bryan, O.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Besser Metal Products Corp., Charlotte, N. C.
Century Engineering Corp., Cedar Rapids, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Cox Mfg. Co., Ridgeville, Ind.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Tenton, N. J.
DeSoto Oil Burner Corp., York, Pa.
Fluid Heat Div., Anchor Post Products, Inc., Baltimore, Md.
Front Rank Furnace Co., Div. Liberty Foundry Co. St. Louis, Mo.
General Automatic Products Corp., Baltimore, Md.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Green Colonial Furnace Co., Des Moines, Ia.
Hall-Neal Furnace Co., Indianapolis, Ind.
Harvey-Whipple, Inc., Springfield, Mass.
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, O.
Herco Oil Burner Corp., Lancaster, Pa.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Johnson Heater Corp., Chelsea, Mass.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Ia.
Lennox Furnace Co., Marshalltown, Ia.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McPherson Furnace & Supply Co., Portland, Ore.
Mechanical Products Co., Seattle, Wash.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., The C. A., Elyria, O.
OverHead Heaters, Inc., Detroit, Mich.
Patten Co., J. V., Sycamore, Ill.
Perfection Stove Co., Cleveland, O.
Petro Div., Iron Fireman Mfg. Co., Cleveland, O.
Prat-Daniel Corp., South Norwalk, Conn.

Quiet Automatic Burner Corp., Newark, N. J.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rybolt Heater Co., Ashland, O.
Sandberg Mfg. Co. Portland, Ore.
Silent Glow Oil Burner Co., Hartford, Conn.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Thatcher Furnace Co., Garwood, N. J.
Thermo-Products, Inc., North Judson, Ind.
Tjernlund Mfg. Co., St. Paul, Minn.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
U. S. Radiator Corp., Detroit, Mich.
Waltham Oil Burner Co., Inc., Boston, Mass.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Ft. Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, O.
York-Shipley, Inc., York, Pa.

FURNACES, FORCED WARM AIR, LOWBOY, COAL FIRED, CAST IRON

For Basement Installation

American Foundry & Furnace Co., Bloomington, Ill.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Majestic Co., Inc., Huntington, Ind.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Premier Furnace Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stokol Stoker Co., Inc. Dayton, O.
United States Radiator Corp., Detroit, Mich.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, FORCED WARM AIR, LOWBOY, COAL FIRED, STEEL

For Basement Installation

American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Iowa.
Coal-O-Matic Co., Trucksville, Pa.
Crane Co., Chicago, Ill.
Deshler Foundry & Machine Works, Deshler, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Electric Furnace-Man, Inc., Emmaus, Pa.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Henry Furnace Co., Medina, Ohio.
Hershey Machine & Foundry Co., Manheim, Pa.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Johnson Heater Corp., Chelsea, Mass.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premium Coal & Oil Co., Cincinnati, Ohio.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Souther Iron Co., E. E., St. Louis, Mo.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sure Comfort Furnace Co., Forest Park, Ill.
Synchromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.
Worsham Co., Inc., Long Beach, Calif.

FURNACES, FORCED WARM AIR, LOWBOY, GAS FIRED, CAST IRON

For Basement Installation

American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Rybolt Heater Co., Ashland, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Sheet Metal Mfg. Co., Youngstown, O.
Souther Iron Co., E. E., St. Louis, Mo.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Thatcher Furnace Co., Garwood, N. J.
Viking Mfg. Corp., Cleveland, Ohio.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, FORCED WARM AIR, LOWBOY, GAS FIRED, STEEL

For Basement Installation

Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., San Leandro, Calif.
Allan Engineering Co., Dallas, Texas.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker, Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Baum Heating, Inc., J .H. Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.

Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Iowa.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc, Lafayette, Ind.
Delco Appliance Div. General Motors Corp., Rochester, N. Y
Delta Heating Corp., Trenton, N.J.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dualtron Co., Pittsburgh, Pa.
Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser and Johnston Co., Div. Liberty Foundry Co., San Francisco, Calif.
Front Rank Furnace Co., St. Louis, Mo.
General Automatic Products Corp., Baltimore, Md.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Golden Gate Sheet Metal Works, Oakland, Calif.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heating Specialties Co., Baltimore, Md. (Stainless)
Heil Co., Milwaukee, Wis.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Henry Furnace Co., Medina, Ohio.
Herbster Products Co., Cleveland, O.
Hess Co., Chicago, Ill.
Hunt Heater Corp., Nashville, Tenn.
Huwer Heating Corp., Milford, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Independence Stove & Mfg. Co., Independence, Mo.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., Pittsburgh, Pa.
Johnson Heater Corp., Chelsea, Mass.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McDonald Mfg. Co., A. Y., Dubuque, Ia.
Metro Metal Mfg. Co., Holt, Mich.
Metzger Machine & Engineering Co., Milwaukee, Wis.
Meyer Furnace Co., Peoria, Ill.
Moncrief Furnace Co., Atlanta, Ga.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo. Mich.
Norman Products Co., Inc., Columbus, Ohio.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Oran Co., Columbus, Ohio.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, O.
Premier Furnace Co., Dowagiac, Mich.
Radiant-Aire Corp., Michigan City, Ind.
Radiation Furnace Corp., Benton Harbor, Mich.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rapid Heat Corp., Detroit, Mich.
Rasch Mfg. Corp., Kansas City, Mo.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Roberts-Gordon Appliance Corp., Buffalo, N. Y.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
Ryniker Steel Products Co., Billings, Mont.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Schill Mfg. Co., Crestline, Ohio.
Scott-Newcomb, Inc., Cleveland, O.
Sequoia Mfg. Co., San Carlos, Calif.
Sheet Metal Mfg. Co., Youngstown, O.
Smith Corp., A. O., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Fort Wayne, Ind.
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
Witte-Toledo Co., Mortemp Furnace Div., Dayton, O.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.
Zink Co., John, Tulsa, Okla.

FURNACES, FORCED WARM AIR, LOWBOY, OIL FIRED, CAST IRON

For Basement Installation

American Foundry & Furnace Co., Bloomington, Ill.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Keith Furnace Co., Des Moines, Iowa
Livingston, Inc., Marshall, Mich.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Portland Stove Foundry Co., Portland, Me.
Ruby Management Co., Pittsburgh, Pa.
Schwab Furnace Co., Milwaukee, Wis.
Sheet Metal Mfg. Co., Youngstown, O.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, FORCED WARM AIR, LOWBOY, OIL FIRED, STEEL

For Basement Installation

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Airwasher Corp., Eaton Rapids, Mich.
American Furnace Co., St. Louis, Mo.
American Ideal-Aire Corp., Mineola, N. Y.
Anchor Div., Stratton & Tersteege Co., New Albany, Ind.
Arcweld Mfg. Co., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry Inc., Stoker Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Baum Heating, Inc., J. H., Youngstown, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Besser Metal Products Corp., Charlotte, N. C.
Brandes Co., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.

Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Iowa.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Certified Furnace Corp., Trenton, N. J.
Chicago Steel Furnace Co., Chicago, Ill.
Coal-O-Matic Co., Trucksville, Pa.
Coleman Co., Inc., Wichita, Kans.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Cox Mfg. Co., Ridgeville, Ind
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Deshler Foundry & Machine Works, Deshler, Ohio.
DeSoto Oil Burner Corp., York, Pa.
Domestic Mfg. Co., Seattle, Wash.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Dualtron Co., Pittsburgh, Pa. (Equipped with electrostatic filter)
Ducane Heating Corp., Lincoln Park, N. J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Electric Furnace-Man, Inc., Emmaus, Pa.
Electrol Burner Mfg. Co., Inc., Rutherford, N. J.
Engineering Industries Co., Ltd., Toronto, Ont., Canada.
Enico Products, Detroit, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Floral City Heater Co., Monroe, Mich.
Fluid Heat Div. Anchor Post Products, Inc., Baltimore, Md.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermanville, Mich.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
General Oil Heating Corp., West New York, N. J.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Glasby Mfg. Co., Inc., J. P., Belleville, N. J.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Harvey-Whipple, Inc., Springfield, Mass.
Heating Specialties Co., Baltimore, Md. (Stainless).
Heil Co., Milwaukee, Wis.
Henry Furnace Co., Medina, Ohio.
Herco Oil Burner Corp., Lancaster, Pa.
Hershey Machine & Foundry Co., Manheim, Pa.
Hess Co., Chicago, Ill.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hotentot Co., Inc., Omaha, Nebr.
Huwer Heating Corp., Milford, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
International Sales Co., San Francisco, Calif.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Jet-Heet, Inc., Englewood, N. J.
Jettronaire, Inc., Pittsburgh, Pa.
Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Leeson Air Conditioning Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Luty Furnace Mfg. Co., Detroit, Mich.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McKee Furnace Co., Minneapolis, Minn.
McPherson Furnace & Supply Co., Portland, Ore.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Oran Co., Columbus, O.
Pacific Gas Heating Co., San Francisco, Calif.
Paragon Oil Burner Corp., Brooklyn, N. Y.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
Petro Div., Iron Fireman Mfg. Co., Cleveland, Ohio.
Prat-Daniel Corp., South Norwalk, Conn.
Premier Furnace Co., Dowagiac, Mich.
Premium Coal & Oil Co., Cincinnati, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Quick Furnace & Supply Co., Des Moines, Iowa.
Quiet Automatic Burner Corp., Newark, N. J.
Radiant-Aire Corp., Michigan City, Ind.
Radiant Utilities Corp., Brooklyn, N. Y.
Radiation Furnace Corp., Benton Harbor, Mich.
Ralph Mfg. Co., Inc., Wadsworth, O.
Ray Oil Burner Co., San Francisco, Calif.
Reif-Rexoil, Inc., Buffalo, N. Y.
Republic Products Co., Philadelphia, Pa.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Silent Sioux Corp., Orange City, Iowa.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Arcoil Corp., Newark, N. J.
Standard Heating Equipment Co., Waterloo, Iowa.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sundstrand Engineering Co., Rockford, Ill.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, O.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tjernlund Mfg. Co., St. Paul, Minn.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio.
Tru-Heet Co., Trenton, N. J.
Turb-O-Tube Furnace, Inc., Buffalo, N. Y.
United Air Heaters, Inc., Seattle, Wash.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waltham Oil Burner Co., E. Boston, Mass.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Weatherall Engineers, Inc., Providence, R. I.
Williams Oil-O-Matic Div., Eureka Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
York-Shipley, Inc., York, Pa.
Zick Sheet Metal Works, Dearborn, Mich.

FURNACES, FORCED WARM AIR, WITH DOMESTIC HOT WATER SUPPLY, GAS FIRED, STEEL

Aqua-Air Corp., Elmont, L. I., N. Y.
Metromatic Mfg. Co., Everett, Mass.
Robot-Auto Heat Corp., Middletown, Conn.

FURNACES, FORCED WARM AIR, WITH DOMESTIC HOT WATER SUPPLY, OIL FIRED, STEEL

Aqua-Air Corp., Elmont, L. I., N. Y.
Metromatic Mfg. Co., Everett, Mass.
Robot-Auto Heat Corp., Middletown, Conn.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY (DIRECT FIRED, FOR LOCATION IN SPACE HEATED AND WITHOUT DUCT DISTRIBUTION)

See Heaters, Unit

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, COAL FIRED, CAST IRON

Exclusively for Duct Distribution of Air

American Foundry & Furnace Co., Bloomington, Ill.
Favorite Stove Co., Piqua, O.
Johnson Heater Corp., Chelsea, Mass.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
McPherson Furnace & Supply Co., Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, COAL FIRED, STEEL

Exclusively for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass.
Armstrong Furnace Co., Columbus, O.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Campbell Heating Co., Des Moines, Ia.
Floral City Heater Co., Monroe, Mich.
Jackson & Church Co., Saginaw, Mich.
Lee Corp., Wilmington, Del.
Lennox Furnace Co., Marshalltown, Ia.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Northwest Foundry & Furnace Co., Portland, Ore.
Round Oak Co., Inc., Dowagiac, Mich.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Syncromatic Corp., Watertown, Wis.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, GAS FIRED, CAST IRON

Exclusively for Duct Distribution of Air

American Foundry & Furnace Co., Bloomington, Ill.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Surface Combustion Corp., Toledo, O.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, GAS FIRED, STEEL

Exclusively for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass.
Airtherm Mfg. Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, O.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
Johnson Heater Corp., Chelsea, Mass.
Lee Corp., Wilmington, Del.
Lennox Furnace Co., Marshalltown, Ia.
Majestic Co., Inc., Huntington, Ind.
McPherson Furnace & Supply Co., Portland, Ore.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Olson & Co., Arthur A., Canfield, O.
Peerless Furnace & Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Prat-Daniel Corp., South Norwalk, Conn.
Republic Products Co., Philadelphia, Pa.
Round Oak Co., Dowagiac, Mich.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Syncromatic Corp., Watertown, Wis.
Tjernlund Mfg. Co., St. Paul, Minn.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, OIL FIRED, CAST IRON

Exclusively for Duct Distribution of Air

American Foundry & Furnace Co., Bloomington, Ill.
Campbell Co., E. K., Kansas City, Mo.
Keith Furnace Co., Des Moines, Ia.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.

FURNACES, FORCED WARM AIR, 400,000 BTUH AND UP CAPACITY, OIL FIRED, STEEL

Exclusively for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass.
Airtherm Mfg. Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Bard Mfg. Co., Bryan, O.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Besser Metal Products Corp., Charlotte, N. C.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Ia.
Chicago Steel Furnace Co., Chicago, Ill.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
Johnson Heater Corp., Chelsea, Mass.
Keith Furnace Co., Des Moines, Ia.
Lee Corp., Wilmington, Del.
Lennox Furnace Co., Marshalltown, Ia.
Majestic Co., Inc., Huntington, Ind.
McPherson Furnace & Supply Co., Portland, Ore.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Northwest Foundry & Furnace Co., Portland, Ore.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olson & Co., Arthur A., Canfield, O.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Prat-Daniel Corp., South Norwalk, Conn.
Quiet Automatic Burner Corp., Newark, N. J.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Dowagiac, Mich.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Syncromatic Corp., Watertown, Wis.
Tjernlund Mfg. Co., St. Paul, Minn.
Weatherall Engineers, Inc., Providence, R. I.

FURNACES, PORTABLE, FOR TEMPORARY HEAT

Air Conditioning Engineering Co., Cambridge, Mass.
Auburn Burner Co., Auburn, Ind.
Bica Co., Girard, O.
Fageol Heat Machine Co., Detroit, Mich.
Gilmore & Co., Jackson G., Columbus, O.
Lennox Furnace Co., Marshalltown, Ia.
Prat-Daniel Corp., South Norwalk, Conn.
Quiet Automatic Burner Corp., Newark, N. J.
Tjernlund Mfg. Co., St. Paul, Minn.
Waltham Oil Burner Co., Inc., Boston, Mass.
Witte-Toledo Co., Mortemp Furnace Div., Toledo, O.

FURNACES, SOLDERING

Aeroil Products Co., Inc., South Hackensack, N. J.
Bernz Co., Otto, Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Eclipse Fuel Engineering Co., Rockford, Ill.
Fieser Co., F. J., New York, N. Y.
Fusion Engineering, Cleveland, Ohio.
Goss Gas Inc., Glenshaw, Pa.
Hones, Inc., Charles A., Baldwin, N. Y. (Gas).
Inland Steel Products Co., Milwaukee, Wis.
Insto-Gas Corp., Detroit, Mich. (Gas)
Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
New Delphos Mfg. Co., Delphos, O. (Charcoal)
Polis Mfg. Co., J. D., Chicago, Ill.
Ransome Co., Emeryville, Calif.
Reiner & Campbell Co., Inc., Newark, N. J.

Reliable Gas Products Co., Cedar Rapids, Iowa.
Sanders, J. A., Fulton, N. Y.
Turner Brass Works, Sycamore, Ill.
Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline, Kerosene).
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric)
Weiss & Co., H., New York, N. Y.
Weldit, Inc., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

FURNACES, WARM AIR, GRAVITY, COAL FIRED, CAST IRON

Agricola Furnace Co., Inc., Gadsden, Ala.
American Foundry & Furnace Co., Bloomington, Ill.
American Furnace Co., St. Louis, Mo.
Bovee Furnace Works, Waterloo, Iowa.
Crane Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Favorite Stove Co., Piqua, Ohio.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Maple City Furnace Co., Monmouth, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quick Furnace & Supply Co., Des Moines, Iowa.
Rybolt Heater Co., Ashland, Ohio.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Thatcher Furnace Co, Garwood, N. J.
Union Mfg. Co., Inc., Boyertown, Pa.
United States Radiator Corp., Detroit, Mich.
Wise Furnace Co., Newark, Ohio.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, WARM AIR, GRAVITY, COAL FIRED, STEEL

American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Bard Mfg. Co., Bryan, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bovee Furnace Works, Waterloo, Iowa.
Campbell Heating Co., Des Moines, Iowa.
Crane Co., Chicago, Ill.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Deshler Foundry & Mach. Wks., Deshler, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Keith Furnace Co., Des Moines, Iowa.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
Meyer Furnace Co., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thos., New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quick Furnace & Supply Co., Des Moines, Iowa.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc., of Ind., Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio
Tri-State Heating Supply, Inc., Fort Wayne, Ind.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.
Worsham Co., Inc., Long Beach, Calif.

FURNACES, WARM AIR, GRAVITY, ELECTRIC

Gray & Dudley Co., Nashville, Tenn. (Floor)
Meier Electric & Machine Co., Inc., Indianapolis, Ind.

FURNACES, WARM AIR, GRAVITY, FLOOR, GAS

Advance Furnace Co., Wichita, Kans.
Andrews Heater Co., Los Angeles, Calif.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Benner-Nawman, Inc., Oakland, Calif.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Cole Hot Blast Mfg. Co., Chicago, Ill.
Coleman Co., Inc., Wichita, Kans.
Deluxe Furnace & Wall Heater Co., Los Angeles, Calif.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Fraser & Johnston Co., San Francisco, Calif.
Gray & Dudley Co., Nashville, Tenn.
Heating Equipment Mfg. Co., San Francisco, Calif.
Holly Mfg. Co., Pasadena, Calif.
Hotstream Heater Co., Cleveland, Ohio.
Hunt Heater Corp., Nashville, Tenn.
International Sales Co., San Francisco, Calif.
Jackson & Church Co., Saginaw, Mich.
King Metal Co., Oklahoma City, Okla.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Lawson Mfg. Co., Pittsburgh, Pa.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Magic Chef, Inc., St. Louis, Mo.
Mahl Mfg. Co., Huntington Park, Calif.
Martin Stamping & Stove Co., Huntsville, Ala.
Meyer Furnace Co., Peoria, Ill.
Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
Myers & Bro. Co., F. E., Ashland, O.
National Appliances, Inc., Pittsburgh, Pa.
Oran Co., Columbus, Ohio.
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rheem Mfg. Co., New York, N. Y.
Samuel Stamping & Enameling Co., Chattanooga, Tenn.
Southwest Mfg. Co., Aurora, Mo.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.

Sunshine Mantle Co., Chanute, Kans.
Surface Combustion Corp., Toledo, Ohio.
Temco, Inc., Nashville, Tenn.
Thermo-Products, Inc., North Judson, Ind.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Ward Heater Co., Los Angeles, Calif.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Zink Co., John, Tulsa, Okla.

FURNACES, WARM AIR, GRAVITY, FLOOR, OIL

Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Benner-Nawman, Inc., Oakland, Calif.
Beyer Metal Products Co., Rosamond, Calif.
Certified Furnace Corp., Trenton, N. J.
Coleman Co. Inc., Wichita, Kans.
Delta Heating Corp., Trenton, N.J.
Domestic Mfg. Co., Seattle, Wash.
Empire Stove Co., Belleville, Ill.
Evans Products Co., Plymouth, Mich.
Gillen Co., J. L., Detroit, Mich.
Jackson & Church Co., Saginaw, Mich.
Kleer-Kleen Mfg. Co., Oakland, Calif.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Mulkey Co., J. F., Detroit, Mich.
Northwest Metal Products, Inc., Seattle, Wash.
Oran Co., Columbus, Ohio.
Queen Stove Works, Inc., Albert Lea, Minn.
Quiet Automatic Burner Corp., Newark, N. J.
Ralph Mfg. Co., Inc., Wadsworth, O.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Therm Oil Burner Co., Seattle, Wash.
Thermo-Products, Inc., North Judson, Ind.
United Air Heaters, Inc., Seattle, Wash.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.

FURNACES, WARM AIR, GRAVITY, GAS FIRED, CAST IRON

Favorite Stove Co., Piqua, Ohio.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Henry Furnace Co., Medina, Ohio.
Hotentot Co., Inc., Omaha, Nebr.
International Heater Co., Utica, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Myers & Bro. Co., F. E., Ashland, O.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Payne Beverly Mfg. Co., Beverly Hills, Calif.
Rybolt Heater Co., Ashland, Ohio.
Sheet Metal Mfg. Co., Youngstown, O.
Souther Iron Co., E. E., St. Louis, Mo.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, WARM AIR, GRAVITY, GAS FIRED, STEEL

Advance Furnace Co., Wichita, Kans.
Airwasher Corp., Eaton Rapids, Mich.
Aladdin Heating Corp., San Leandro, Calif.
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, O.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Columbia Burner Co., Toledo, Ohio.
Conco Engineering Works, Mendota, Ill.
Consolidated Industries, Inc., Lafayette, Ind.
Dornback Furnace & Foundry Co., Cleveland, Ohio.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Firewel Co., Inc., Buffalo, N.Y.
Floral City Heater Co., Monroe, Mich.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, Ohio.
Fraser and Johnston Co., San Francisco, Calif.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Green Colonial Furnace Co., Des Moines, Iowa.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Specialties Co., Baltimore, Md. (Stainless)
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Holly Mfg. Co., Pasadena, Calif.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Independence Stove & Mfg. Co., Independence, Mo.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N. Y.
International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Lawson Mfg. Co., Pittsburgh, Pa.
Leeson Air Cond. Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
Mayflower Air Conditioners, Inc., St. Paul, Minn.
McDonald Mfg. Co., A. Y., Dubuque, Ia.
Metzger Machine & Engineering Co., Milwaukee, Wis.
Meyer Furnace Co., Peoria, Ill.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
Myers & Bro. Co., F. E., Ashland, O.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, Ohio.
Nugent Furnaces, Thomas, New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Oran Co., Columbus, Ohio.
Pacific Gas Heating Co., San Francisco, Calif.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Perfection Stove Co., Cleveland, Ohio.
Radiant-Aire Corp., Michigan City, Ind.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rasch Mfg. Corp., Kansas City, Mo.
Rheem Mfg. Co., New York, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., Metuchen, N. J.
Round Oak Co., Inc. of Indiana, Dowagiac, Mich.
Ruby Management Co., Pittsburgh, Pa.
Rybolt Heater Co., Ashland, Ohio.
Ryniker Steel Products Co., Billings, Mont.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Scott-Newcomb, Inc., Cleveland, O.
Sheet Metal Mfg. Co., Youngstown, O.
Souther Iron Co., E. E., St. Louis, Mo.
Steel Products Engineering Co., Combustioneer Div., Springfield, O.
Stewart Co., W. H., Oklahoma City, Okla.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Surface Combustion Corp., Toledo, Ohio.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
Toridheet Div., Cleveland Steel Products Corp., Cleveland, Ohio
United States Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williams Oil-O-Matic Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, Ohio.
Zick Sheet Metal Works, Dearborn, Mich.

FURNACES, WARM AIR, GRAVITY, OIL FIRED, CAST IRON

Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Keith Furnace Co., Des Moines, Iowa.

Mueller Furnace Co., L. J., Milwaukee, Wis.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, WARM AIR, GRAVITY, OIL FIRED, STEEL

Airwasher Corp., Eaton Rapids, Mich.
American Furnace Co., St. Louis, Mo.
Anchor Div. Stratton & Terstegge Co., New Albany, Ind.
Arcweld Mfg. Co., Inc., Seattle, Wash.
Armstrong Furnace Co., Columbus, Ohio.
Auburn Burner Co., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Bard Mfg. Co., Bryan, Ohio.
Beck Engineering Combustion Kompany, St. Louis, Mo.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Beyer Metal Products Co., Rosamond, Calif.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Campbell Heating Co., Des Moines, Iowa.
Cary Mfg. Co., Waupaca, Wis.
Century Engineering Corp., Cedar Rapids, Iowa.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Mendota, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Consolidated Industries, Inc., Lafayette, Ind.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delta Heating Corp., Trenton, N.J.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Evans Products Co., Plymouth, Mich.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Farquhar Furnace Co., Wilmington, Ohio.
Floral City Heater Co., Monroe, Mich.
Furblo Co., Hermansville, Mich.
Gillen Co., J. L., Detroit, Mich.
Green Colonial Furnace Co., Des Moines, Iowa.
Hall-Neal Furnace Co., Indianapolis, Ind.
Hart & Crouse Corp., Oneida, N. Y.
Hart Heat Div., Avery Farm Machinery Co., Peoria, Ill.
Heating Specialties Co., Baltimore, Md. (Stainless)
Henry Furnace Co., Medina, Ohio.
Hess Co., Chicago, Ill.
Home Furnace Co., Holland, Mich.
Hotentot Co., Inc., Omaha, Nebr.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
International Heater Co., Utica, N.Y.
International Oil Burner Co., St. Louis, Mo.
Iron Fireman Mfg. Co., Cleveland, O.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Kaustine Furnace & Tank Corp., Perry, N. Y.
Keith Furnace Co., Des Moines, Iowa.
Kleenair Furnace Co., Portland, Ore.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Laco Oil Burner Co., Inc., Griswold, Ia.
Leeson Air Cond. Corp., Detroit, Mich.
Lennox Furnace Co., Marshalltown, Iowa.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Lundt, Inc., Ernest C., Little Falls, N. J.
Majestic Co., Inc., Huntington, Ind.
McKee Furnace Co., Minneapolis, Minn.
Metro Metal Mfg. Co., Holt, Mich.
Meyer Furnace Co., Peoria, Ill.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Mulkey Co., J. F., Detroit, Mich.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thomas, New York, N. Y.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Oran Co., Columbus, Ohio.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Queen Stove Works, Inc., Albert Lea, Minn.
Quincy Stove Mfg. Co., Quincy, Ill.
Radiant-Aire Corp., Michigan City, Ind.
Ralph Mfg. Co., Inc., Wadsworth, O.
Rosebraugh Co., W. W., Salem, Ore.
Round Oak Co., Inc. of Ind., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio.
St. Louis Furnace Mfg. Co., St. Louis, Mo.
Sandberg Mfg. Co., Portland, Ore.
Schill Mfg. Co., Crestline, O.
Schwab Furnace Co., Milwaukee, Wis.
Scott-Newcomb, Inc., Cleveland, O.
Souther Iron Co., E. E., St. Louis, Mo.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Superior Furnace & Mfg. Co., Plymouth, Mich.
Sure Comfort Furnace Co., Forest Park, Ill.
Syncromatic Corp., Watertown, Wis.
Thatcher Furnace Co., Garwood, N. J.
Therm-O-Blast Div., O'Halloran Inds., Detroit, Mich.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Waterman-Waterbury Co., Minneapolis, Minn.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Williamson Heater Co., Cincinnati, Ohio.
Zick Sheet Metal Works, Dearborn, Mich.

FURNACES, WARM AIR, GRAVITY, PIPELESS, CAST IRON

Agricola Furnace Co., Inc., Gadsden, Ala.
American Furnace Co., St. Louis, Mo.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gross-Aire Mfg. Co., St. Louis, Mo.
Henry Furnace Co., Medina, Ohio.
International Heater Co., Utica, N. Y.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Olsen Mfg. Co., The C. A., Elyria, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Rybolt Heater Co., Ashland, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Souther Iron Co., E. E., St. Louis, Mo.
Spear Stove & Heater Co., James, Philadelphia, Pa.
United States Radiator Corp., Detroit, Mich.
XXth Century Heating & Ventilating Co., Akron, Ohio.

FURNACES, WARM AIR, GRAVITY, PIPELESS, STEEL

Armstrong Furnace Co., Columbus, Ohio.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Delta Heating Corp., Trenton, N. J.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hart & Crouse Corp., Oneida, N. Y.
Hotentot Co., Inc., Omaha, Nebr.
Ingersoll Products Div., Borg-Warner Corp., Kalamazoo, Mich.
Jackson & Church Co., Saginaw, Mich.
Keith Furnace Co., Des Moines, Iowa.
Lawson Mfg. Co., Pittsburgh, Pa.
Lennox Furnace Co., Marshalltown, Iowa.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Nugent Furnaces, Thos., New York, N. Y.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Rosebraugh Co., W. W., Salem, Ore.
Schill Mfg. Co., Crestline, Ohio.
Schwab Furnace Co., Milwaukee, Wis.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Thatcher Furnace Co., Garwood, N. J.
United States Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Williamson Heater Co., Cincinnati, O.

FURNACES, WARM AIR, GRAVITY, WALL

A. C. Co., Los Angeles, Calif. (Gas)
Advance Furnace Co., Wichita, Kans.
Andrews Heater Co., Los Angeles, Calif. (Gas)
Beyer Metal Products Co., Rosamond, Calif. (Oil)
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, Ohio. (Gas)
Central States Mfg. Co., Inc., Arkansas City, Kans. (Gas)
Chattanooga Implement & Mfg. Co., Chattanooga, Tenn. (Gas)
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas. (Gas)
Coleman Co., Inc., Wichita, Kans.
Commonwealth Co., Alhambra, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Delta Heating Corp., Trenton, N.J. (Oil)

Deluxe Furnace & Wall Heater Co., Los Angeles, Calif. (Gas)
Electromode Corp., Rochester, N. Y., (Electric)
Empire Stove Co., Belleville, Ill. (Gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Hammel Radiator Engineering Co., Los Angeles, Calif. (Gas)
Heating Equipment Mfg. Co., San Francisco, Calif. (Gas)
Hirsh Mfg. Co., Garland, Texas. (Gas & electric)
Holly Mfg. Co., Pasadena, Calif. (Gas)
Hunt Heater Corp., Nashville, Tenn. (Gas)
International Sales Co., San Francisco, Calif. (Gas)
Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)
Lawson Mfg. Co., Pittsburgh, Pa. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil)
Magic Chef, Inc., St. Louis, Mo.
Mahl Mfg. Co., Huntington Park, Calif. (Gas)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich. (Gas)
Norman Products Co., Inc., Columbus, O.
Northwest Metal Products, Inc., Seattle, Wash.
Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
O'Keefe & Merritt Co., Los Angeles, Calif. (Gas)
Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif. (Gas)
Pioneer Furnace Co., Los Angeles, Calif. (Gas)
Quincy Stove Mfg. Co., Quincy, Ill.
Rheem Mfg. Co., New York, N. Y. (Gas)
Royal Jet, Inc., Alhambra, Calif. (Gas)
Samuel Stamping & Enameling Co., Chattanooga, Tenn. (Gas)
Silent Sioux Corp., Orange City, Iowa. (Gas & oil)
San Carlos Mfg. Co., San Carlos, Calif. (Gas and LP)
South Wind Div., Stewart-Warner Corp., Indianapolis, Ind. (Gas)
Southwest Mfg. Co., Aurora, Mo. (Gas)
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind. (Gas and Oil)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
Utility Appliance Corp., Los Angeles, Calif. (Gas)
Ward Heater Co., Los Angeles, Calif.
Williams Radiator Co., Glendale, Calif. (Gas)
Zink Co., John, Tulsa, Okla. (Nat., L. P. & Mfg. Gas)

FURNACES, WARM AIR, GRAVITY, WOOD BURNING, CAST IRON

Excelsior Stove & Mfg. Co., Quincy, Ill.
Homer Furnace & Foundry Corp., Coldwater, Mich.
International Heater Co., Utica, N. Y.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Montag Stove & Furnace Works, Portland, Ore.
Portland Stove Foundry Co., Portland, Maine.
Schwab Furnace Co., Milwaukee, Wis.

FURNACES, WARM AIR, GRAVITY, WOOD BURNING, STEEL

Arcweld Mfg. Co., Inc., Seattle, Wash.
Bovee Furnace Works, Waterloo, Iowa.
Campbell Co., E. K., Kansas City, Mo.
Campbell Heating Co., Des Moines, Iowa.
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Furblo Co., Hermansville, Mich.
Gross-Aire Mfg. Co., St. Louis, Mo.
Jackson & Church Co., Saginaw, Mich.
Kalamazoo Furnace & Appliance Mfg. Co., Kalamazoo, Mich.
Moncrief Furnace & Mfg. Co., Dallas, Texas.
Montag Stove & Furnace Works, Portland, Ore.
Northwest Foundry & Furnace Co., Portland, Ore.
Nugent Furnaces, Thomas, New York, N. Y.
Rosebraugh Co., W. W., Salem, Ore.
Sandberg Mfg. Co., Portland, Ore. (Sawdust)
Syncromatic Corp., Watertown, Wis.
Williamson Heater Co., Cincinnati, O.
Worsham Co., Inc., Long Beach, Calif.

GALVANIZED SHEETS

See Sheets, Metal, Galvanized

GAS BURNER CONTROLS

See Controls; Control Systems

GAS BURNERS

See Burners, Conversion, Gas

GATES, BLAST

Berger Bros. Co., Philadelphia, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Clarage Fan Co., Kalamazoo, Mich.
Day Co., Minneapolis, Minn.
Eclipse Fuel Engineering Co., Rockford, Ill.
Goethel Sheet Metal Works, Inc., Alfred, Milwaukee, Wis.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Maysteel Products, Inc., Milwaukee, Wis.
Newcomb-Detroit Co., Detroit, Mich.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
R-S Products Corp., Philadelphia, Pa.
Rees Blow Pipe Mfg. Co., Inc., San Francisco, Calif.
Skinner Heating & Ventilating Co., St. Louis, Mo.
Spencer Turbine Co., Hartford, Conn.
Western Blower Co., Seattle, Wash.
Winkler & Sons, Inc., A. E., Milwaukee, Wis.

GAUGES, DRAFT, INDICATING, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Detroit Air Conditioning Service Co., Nashville, Mich.
Dwyer Mfg. Co., F. W., Chicago, Ill.
Ellison Draft Gage Co., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Hays Corp., Michigan City, Ind.
Hill & Co., E. Vernon, Lake Geneva, Wis.
Meriam Instrument Co., Cleveland, Ohio.
Moeller Instrument Co., Richmond Hill, N. Y.
Perfex Corp., Milwaukee, Wis.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Preferred Utilities Mfg. Corp., New York, N. Y.
Uehling Instrument Co., Paterson, N. J.

GAUGES, TANK, FUEL OIL

Applied Mechanics Co., Boston, Mass.
Barclay, Inc., Robt., Chicago, Ill.
Bearlee Products Co., Green Bay, Wis.
Boston Machine Works Co., Lynn, Mass.
Hasko Utiliites Co., New York, N. Y.
Jessup Signal Gauge Co., Minneapolis, Minn.
Krueger Sentry Gauge Co., Green Bay, Wis.
Liquidepth Indicators, Inc., Long Island City, N. Y.
Liquidometer Corp., Long Island City, N. Y.
Mel-Gauge Co., New Haven, Conn.
Morse-Smith-Morse Co., The, Watertown, Mass.
Oil Equipment Mfg. Co., New Haven, Conn.
Rochester Mfg. Co., Inc., Rochester, N.Y.
Scully Signal Co., Melrose, Mass.
Uehling Instrument Co., Paterson, N. J.

GERMICIDAL APPARATUS

See Air Sterilizers

GLASS, WIRE, FOR SKYLIGHTS

Atcheson Glass Co., T. J., Buffalo, N. Y.
Bache & Co., Semon, New York, N. Y.
Libbey-Owens-Ford Glass Co., Toledo, Ohio.
Pennsylvania Wire Glass Co., Philadelphia, Pa. (Corrugated wire)
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Robertson Co., H. H., Pittsburgh, Pa.

GRAVITY FURNACES

See Furnaces, Warm Air, Gravity

GRAVITY REGISTERS

See Registers, Heating, Ventilating and Air Conditioning

GREASE FILTERS

See Filters, Grease

GRILLES, HEATING, VENTILATING AND AIR CONDITIONING

Also See Faces and Registers

A & A Register Co., Cleveland, Ohio.
A-J Mfg. Co., Kansas City, Mo.
Acme Wire & Iron Works, Detroit, Mich.
Air Control Products, Inc., Coopersville, Mich.
American Warming & Ventilating Co., Toledo, Ohio.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.

Beckley Perforating Co., Garwood, N. J.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Controlair Mfg. Co., Los Angeles, Calif.
Cross Engineering Co., Carbondale, Pa.
Diamond Mfg. Co., Wyoming, Pa.
Erdle Perforating Co., Rochester, N. Y.
Greenberg's Sons, M., San Francisco, Calif.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.
Hastings Air Cond. Co., Inc., Hastings, Nebr.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Johnston & Chapman Co., Chicago, Ill.
Juniper Elbow Co., Inc., Middle Village, L. I., N. Y.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Louvra Corp., Union, N.J.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Metal Carrier Corp., Grand Rapids, Mich.
Midco Register Corp., St. Paul, Minn.
Mundt & Sons, Charles, Jersey City, N. J.
Patco Mfg. Co., Philadelphia, Pa.
Radiant-Aire Corp., Michigan City, Ind.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Rock Island Register Co., Rock Island, Ill.
Smith Co., J. B., Philadelphia, Pa.
Stewart Mfg. Co., Cedar Grove, N. J.
Titus, Inc., Waterloo, Iowa.
Titus Mfg. Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.
U. S. Radiator Corp., Detroit, Mich.
United States Register Co., Battle Creek, Mich.
Waterloo Register Co., Inc., Waterloo, Ia.
Wilde Register & Grille Co., Detroit, Mich.

GRINDERS, BUFFERS, POLISHERS AND SANDERS

See Buffers, Grinders, Polishers and Sanders

GROOVING MACHINES

See Machines, Grooving

GUARDS, SNOW

Barnard Co., Geo. A., Worcester, Mass.
Berger Bros. Co., Philadelphia, Pa.
Cartier & Sons Co., M. N., Providence, R. I.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cromley's, Lewisburg, Pa. (For slate & standing seam roofs)
Danzer Metal Works Co., Hagerstown, Md. (All types).
Downs-Smith Brass & Copper Co., New York, N. Y.
Folsom Snow Guard Co., Holliston, Mass.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Levow, David, New York, N. Y.
Maysteel Products, Inc., Milwaukee, Wis.
Obdyke, Inc., Philadelphia, Pa.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

GUNS, RIVET

Chicago Pneumatic Tool Co., New York, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind rivet)
Remington Arms Co., Inc., Bridgeport, Conn.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind rivet)
Velocity-Power Tool Co., Pittsburgh, Pa.

GUNS, SOOT

Miller Products Co., Lansing, Mich.
S. O. S. Products Co., Inc., Brooklyn, N. Y.

GUNS, SPRAY, METAL

Schori Process, Div. Ferro-Co Corp., Long Island City, N. Y.
Wall Colmonoy Corp., Detroit, Mich.

GUNS, SPRAY, PAINT

Binks Mfg. Co., Chicago, Ill.
Black Mfg. Co., Harrison, N. J.
Champion Implement Corp., New York, N. Y.
DeVilbiss Co., Toledo, Ohio.
Eclipse Air Brush Co., Newark, N. J.
Electric Sprayit Co., Sheboygan, Wis.
Electro Dustless Painting, Inc., Elmwood, Conn.
Plummer Spray Equipment Co., Napoleon, Ohio.
Portable Electric Tools, Inc., Chicago, Ill.
Spray Engineering Co., Somerville, Mass.

GUTTER ACCESSORIES

Hangers, Strainers, Miters, Ends, Thimbles, etc.

Abbot Mfg. Co., Painesville, Ohio. (Hangers).
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala.
American Metal Products, Los Angeles, Calif.
Atchison Specialty Mfg. Co., Atchison, Kans.
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Downs-Smith Brass & Copper Co., New York, N. Y.
Eav-Tex Co., Havertown, Pa. (Roof gutter protection).
Enderle Inc., Ltd., Frank X., Los Angeles, Calif.
Famous Furnace Co., Cleveland, Ohio. (Strap hangers, end caps).
Galvan Mfg. Co., New Albany, Ind.
Grand Rapids Wire Products Co., Grand Rapids, Mich.
Gray Metal Products, Inc., Rochester, N. Y.
Harrison Sheet Steel Co., Chicago, Ill.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper).
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Klauer Mfg. Co., Dubuque, Iowa.
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lamb & Ritchie Co., Cambridge, Mass.
Levow, David, New York, N. Y.
Lockhart Mfg. Corp., Detroit, Mich.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Melaway Corp., Brandon, Wis.
Moncrief Lenoir Mfg. Co., Houston, Tex.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Ohio Wire Products Co., Dover, Ohio. (Hangers).
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Ralph Mfg. Co,. Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum).
Riggin Metal Products, Inc., Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. D.
Snap-On Mfg. Co., Chicago, Ill. (Hangers).
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Steele Mfg. Co., Ashland, Ky. (Gutter guards)
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tiffin Art Metal Co., Tiffin, Ohio. (Hangers, miters, ends, thimbles)
Tiffin Eaves Trough Clamp Co., Tiffin, Ohio. (Clamp).
Wade Mfg. Co., Div. of Woodruff & Edwards, Inc., Elgin, Ill. (Roof Drains).
Wallace Co., William, Metalbestos Div., Belmont, Calif.
Wheeling Corrugating Co., Wheeling, W. Va.

GUTTER FORMERS

See Machines, Gutter Forming

GUTTERS

Ajax Furnace Fittings Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
American Brass Co., New York, N. Y. (Copper)
Barnes Metal Products Co., Chicago, Ill.
Bayonne Steel Products Co., Newark, N. J.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Cheney Flashing Co., Trenton, N. J.
Enderle Inc., Ltd., Frank X., Los Angeles, Calif. (Galvanized & copper)
Harrison Sheet Steel Co., Chicago, Ill. (Alum.)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Galvanized & copper)

Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Galvanized steel)
Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
Moncrief Lenoir Mfg. Co., Houston, Tex.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Obdyke, Inc., B. P., Philadelphia, Pa. (Copper, galv. & stainless steel)
Overly Mfg. Co., Greensburg, Pa. (Copper & aluminum)
Penn Supply & Metal Corp., Philadelphia, Pa. (Galvanized, copper & aluminum)
Perkinson, William J., Chicago, Ill. (Copper & galvanized)
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Quaker State Metals Co., Lancaster, Pa. (Aluminum)
Reeves Steel & Mfg. Co., Dover, Ohio. (Galvanized steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
Ryniker Steel Products Co., Billings, Mont.
St. Paul Corrugating Co., St. Paul, Minn. (Galvanized steel)
Schecter Bros. Co., Philadelphia, Pa. (Galvanized & copper)
Schoedinger, F. O., Columbus, Ohio. (Galvanized, stainless steel & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Aluminum, copper, galvanized & zinc)
Sheet Metal Products Co., Peoria, Ill.
Sioux Steel Co., Sioux Falls, S. Dak. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass. (Galv. & copper)
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Standard Furnace Supply Co., Omaha, Nebr. (Galv.)
Superior Safety Furnace Pipe Co., Detroit, Mich.
Thor Metal Products Co., Inc., Syracuse, N. Y. (Galv. & copper)
Tiffin Art Metal Co., Tiffin, Ohio. (Aluminum, stainless steel, copper & galv.)
Van Noorden Co., E., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va. (Galvanized steel)
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Galvanized & copper)
York Corrugating Co., York, Pa. (Galvanized & copper)

HAMMERS, POWER

Black & Decker Mfg. Co., Towson, Md. (Electric)
Borm Mfg. Co., Elgin, Ill. (Pneumatic)
Chicago Pneumatic Tool Co., New York, N. Y.
Keller Tool Co., Grand Haven, Mich. (Pneumatic)
Merchandising and Mfg. Associates, Inc., Lancaster, Pa. (Pneumatic)
Millers Falls Co., Greenfield, Mass. (Electric)
Nobel & Stanton, Inc., Bedford, Ohio. (Electric)
Phillips Drill Co., Michigan City, Ind. (Electric)
Powder Power Tool Corp., Portland, Ore. (Powder charged)
Rotor Tool Co., Cleveland, Ohio. (Pneumatic)
Skil Corporation, Chicago, Ill. (Electric & pneumatic)
Stanley Electric Tool Div., Stanley Works, New Britain, Conn. (Electric)
Superior Pneumatic & Mfg., Inc., Cleveland, Ohio. (Pneumatic)
Syntron Co., Homer City, Pa. (Electric)
Thor Power Tool Co., Aurora, Ill. (Electric & pneumatic)
Van Products Co., Erie, Pa. (Pneumatic-foot controlled)
Whiting Corp., Harvey, Ill. (Electric)
Wodack Electric Tool Corp., Chicago, Ill. (Electric)

HAND SHEARS

See Tools, Sheet Metal Workers

HANGERS AND SUPPORTS, DUCT

See Fastenings, Sheet Metal

HARDWARE, FOR CABINETS AND CASINGS

Handles, name plates, locks, etc.

American Cabinet Hardware Corp., Rockford, Ill. (Pulls, knobs, hinges, catches, etc.)
American Insulator Corp., New Freedom, Pa.
Corbin Div., P. & F., American Hardware Corp., New Britain, Conn. (Handles, catches, locks, hinges)
Etched Products Co., Long Island City, N. Y. (Name Plates)
Fisher Brass Foundry, Los Angeles, Calif. (Handles)
Greenberg's Sons, M., San Francisco, Calif. (Name plates, letters, hinges, bolts, latches)
Hartwell Co., Los Angeles, Calif.
Moss Industries, Inc., Brooklyn, N. Y.
National Lock Co., Rockford, Ill. (Hinges)
Premier Metal Etching Co., Long Island City, N. Y. (Name plates)
Soss Mfg. Co., Detroit, Mich. (Invisible hinges)

HARDWARE, DUCT FITTING

Duro-Dyne Corp., Hempstead, L. I., N. Y.
Hart & Cooley Mfg. Co., Holland, Mich.
Hartwell Co., Los Angeles, Calif.

HEAT PUMPS

See Units, Air Conditioning, Central Plant, Summer-Winter

HEAT RECOVERERS

See Recoverers, Heat

HEATERS, DOMESTIC WATER, STORAGE TYPE, ELECTRIC

Bard Mfg. Co., Bryan, Ohio.
Bastian-Morley Co., Inc., La Porte, Ind.
Bock Corp., Madison, Wis.
Buckeye Water Heater Co., Cleveland, O.
Cady Co., Sub. General Fittings Co., Providence, R. I.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Cleveland Heater Co., Cleveland, Ohio.
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Crane Co., Chicago, Ill.
Cuprometal Mfg. Corp., Corona, N. Y.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
Gray & Dudley Co., Nashville, Tenn.
Hotstream Heater Co., Cleveland, Ohio.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Lawson Mfg. Co., Pittsburgh, Pa.
McGraw Electric Co., Clark Div., Chicago, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mor-Flo Heater Corp., Cleveland, O.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia, Pa.
Perfection Stove Co., Cleveland, Ohio.
Piatt Products Corp., Lansing, Mich.
Red Spot Electric Co., Tacoma, Wash.
Rheem Mfg. Co., New York, N. Y.
Smith Corp., A. O., Milwaukee, Wis.
Sunbeau Heater Co., Los Angeles, Calif.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Tru-Mac Mfg. Co., Reading, Mass.
United States Radiator Corp., Detroit, Mich.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Westinghouse Electric Corp., Pittsburgh, Pa.
Wood Co., John, Conshohocken, Pa.
York-Shipley, Inc., York, Pa.

HEATERS, DOMESTIC WATER, STORAGE TYPE, GAS FIRED (ALSO LP GAS)

Aldrich Co., Wyoming, Ill.
Aqua-Air Corp., Elmont, L. I., N. Y.
Bard Mfg. Co., Bryan, Ohio.
Bastian Mfg. Co., W. B., Los Angeles, Calif.
Bastian-Morley Co., Inc., LaPorte, Ind.
Bock Corp., Madison, Wis.
Bryant Corp., C. L., Cleveland, Ohio.
Bryant Heater Div. Affiliated Gas Equipment Inc., Cleveland, Ohio.
Buckeye Water Heater Co., Cleveland, Ohio.
Cirklair Products Div. Folsom Co., Inc., Dallas, Texas.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Cleveland Heater Co., Cleveland, Ohio.
Coleman Co., Inc., Wichita, Kans. (and LP)
Combustion Engineering Co., Inc., Chattanooga, Tenn.
Continental Water Heater Co., Los Angeles, Calif.
Crane Co., Chicago, Ill.
Dary Co., W. M., Long Beach, Calif.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Dearborn Stove Co., Dallas, Tex.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.

Evans Products Co., Plymouth, Mich.
EverHot Heater Co., Detroit, Mich.
Eveready Supply Co., Dallas, Texas.
General Water Heater Corp., Burbank, Calif.
Graham Hambly Co., Los Angeles, Calif.
Hamler Boiler & Tank Co., Chicago, Ill.
Handley-Brown Heater Co., Jackson, Mich. (With circulating fan for augmenting central heating systems)
Harrison Sheet Steel Co., Chicago, Ill.
Hi-Qua Mfg. Co., Philadelphia, Pa.
Hotstream Heater Co., Cleveland, Ohio.
Hoyt Heater Co. of No. Calif., Oakland, Calif.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Iron Fireman Mfg. Co., Cleveland, O.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Lawson Mfg. Co., Pittsburgh, Pa.
Los Angeles Gas Appliance Co., Inc., Los Angeles, Calif.
Lovekin Water Heater Co., Philadelphia, Pa.
McDaniel Mfg. Co., Inc., Dallas, Texas.
McGraw Electric Co., Clark Div., Chicago, Ill.
Mor-Flo Heater Corp., Cleveland, O.
Mustee Heater Co., Cleveland, Ohio.
National Appliances, Inc., Pittsburgh, Pa. (Nat., Mfg., LP)
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Pacific Coast Heater Corp., San Gabriel, Calif.
Pennsylvania Range Boiler Co., Philadelphia, Pa.
Perfection Stove Co., Cleveland, O.
Pioneer Water Heater Corp., Los Angeles, Calif.
Pittsburgh Water Heater Co., Pittsburgh, Pa.
Rasch Mfg. Corp., Kansas City, Mo.
Republic Heater Corp., Huntington Park, Calif.
Rheem Mfg. Co., New York, N. Y.
Ruud Mfg. Co., Pittsburgh, Pa.
Schoedinger, F. O., Columbus, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Southwestern Heater Corp., Dallas, Texas.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sunbeau Heater Co., Los Angeles, Calif. (LP, Nat. & Mfg.)
Sunshine Mantle Co., Chanute, Kans.
SuperbO Mfg. Co., Los Angeles, Calif.
Thompson Mfg. Co., A. F., Huntington, W. Va.
Trageser Copper Works, Inc., Maspeth, L.I., N.Y.
United States Radiator Corp., Detroit, Mich.
Utility Appliance Corp., Los Angeles, Calif.
Viking Mfg. Corp., Cleveland, Ohio.
Wayne Home Equipment Co., Inc., Fort Wayne, Ind.
Wood Co., John, Conshohocken, Pa.
York-Shipley, Inc., York, Pa.

HEATERS, DOMESTIC WATER, STORAGE TYPE, OIL FIRED

Aldrich Co., Wyoming, Ill.
Allen Mfg. Co., Inc., Nashville, Tenn.
Aqua-Air Corp., Elmont, L. I., N. Y.
Bock Corp., Madison, Wis.
Breeze Corps., Inc., Newark, N. J.
Brown Products Co., Forest Hills, N. Y.
Buckeye Water Heater Co., Cleveland, O.
Century Engineering Corp., Cedar Rapids, Iowa.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Coleman Co., Inc., Wichita, Kans.
Crane Co., Chicago, Ill.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Dowagiac Steel Furnace Co., Dowagiac, Mich.
Duo-Therm Div., Motor Wheel Corporation, Lansing, Mich.
Electrol Burner Mfg. Co., Rutherford, N. J.
Evans Products Co., Plymouth, Mich.
General Oil Heating Corp., West New York, N. J.
Gilcor Products Corp., Dowagiac, Mich.
Gillen Co., J. L., Dowagiac, Mich.
Gilmore & Co., Jackson G., Columbus, Ohio.
Hotstream Heater Co., Cleveland, Ohio.
Hynes & Cox Electric Corp., Watervliet, N. Y.
Johnson Co., S. T., Oakland, Calif. & Philadelphia, Pa.
Kresky Mfg. Co., Inc., Petaluma, Calif.
Kresno-Stamm Co., New York, N. Y.
Little Burner Co., Inc., H. C., San Rafael, Calif.
Nu-Way Corp., Rock Island, Ill.
Perfection Stove Co., Cleveland, Ohio.
Piatt Products Corp., Lansing, Mich.
Preferred Utilities Mfg. Corp., New York, N. Y.
Ray Oil Burner Co., San Francisco, Calif.
Republic Products Co., Philadelphia, Pa.
Rheem Mfg. Co., New York, N. Y.
Sunbeau Heater Co., Los Angeles, Calif.
Thermo-Products, Inc., North Judson, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Toledo Heater Co., Toledo, Ohio.
Viking Mfg. Corp., Cleveland, Ohio.

HEATERS, DOMESTIC WATER, STORAGE TYPE, STOKER FIRED

Aqua-Air Corp., Elmont, L. I., N. Y.
Gehl Bros. Mfg. Co., West Bend, Wis.

HEATERS, SCHOOL ROOM

Agricola Furnace Co., Inc., Gadsden, Ala.
Air Conditioning Engineering Co., Cambridge, Mass. (Oil)
Campbell Heating Co., Des Moines, Iowa.
Chicago Steel Furnace Co., Chicago, Ill. (Gas & oil)
Electriglas Corp., Bergenfield, N. J. (Electric)
Daniels Mfg. Co., Inc., Sam, Hardwick, Vt. (Wood)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Green Colonial Furnace Co., Des Moines, Iowa. (Coal)
Hart & Crouse Corp., Oneida, N. Y.
Home Furnace Co., Holland, Mich. (Coal)
Homer Furnace & Foundry Corp., Coldwater, Mich.
Keith Furnace Co., Des Moines, Iowa.
MaGirl Foundry & Furnace Co., Bloomington, Ill. (Coal, oil & gas)
Marshall Furnace Co., Marshall, Mich. (Coal)
Meyer Furnace Co., Peoria, Ill. (Coal)
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas & oil)
Norman Products Co., Inc., Columbus, O. (Gas)
Ohio Foundry & Mfg. Co., Steubenville, O. (Gas)
Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Perfection Stove Co., Cleveland, Ohio. (Oil & gas)
Portland Stove Foundry Co., Portland, Maine.
Prat-Daniel Corp., South Norwalk, Conn.
Premier Furnace Co., Dowagiac, Mich. (Oil, gas & coal)
St. Clair Foundry Corp., Centralia, Ill.
Surface Combustion Corp., Toledo, Ohio. (Gas)
Temco, Inc., Nashville, Tenn. (Gas)
XXth Century Heating & Ventilating Co., Akron, Ohio. (Coal)

HEATERS, SPACE, CABINET TYPE

Acme Electric Heating Co., Boston, Mass. (Electric)
Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa. (Gas)
Agricola Furnace Co., Inc., Gadsden, Ala. (Coal)
Allen Mfg. Co., Inc., Nashville, Tenn. (Oil)
Armstrong Products Corp., Huntington, W. Va. (Gas & electric)
B & C Metal Stamping Co., Atlanta, Ga. (Nat., Mfg., LP)
Beyer Metal Products Co., Rosamond, Calif. (Oil)
Bryant Heater Div. Affiliated Gas Equipment, Inc., Cleveland, Ohio. (All gases)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Electric)
Chambers Products, Inc., Indianapolis, Ind. (Gas)
Chattanooga Implement & Mfg. Co., Chattanooga, Tenn. (gas)
Cirklair Products Div., Folsom Co., Inc., Dallas, Texas. (Gas)
Cole Hot Blast Mfg. Co., Chicago, Ill. (Coal, Oil, Gas, Wood)
Coleman Co., Inc., Wichita, Kans. (Oil & gas)
Coroaire Heater Corp., Cleveland, Ohio. (Mfg. & mixed gases)
Davison, Inc., Frank D., Los Angeles, Calif. (Gas)
Dearborn Stove Co., Dallas, Texas (Gas)
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich. (Oil & gas)
Easyheet Inc., Seattle, Wash. (Oil)
Electromode Corp., Rochester, N. Y. (Electric)
Empire Stove Co., Belleville, Ill. (Gas)
Enterprise Foundry Co., Belleville, Ill. (Coal and Wood)
Evans Products Co., Plymouth, Mich. (Oil & gas)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Coal)
Florence Stove Co., Gardner, Mass. (Oil & gas)
General Gas Light Co., Kalamazoo, Mich. (Gas)
Gray & Dudley Co., Nashville, Tenn. (Coal, gas, oil)
Harrison Sheet Steel Co., Chicago, Ill.
Heating Equipment Mfg. Co., San Francisco, Calif. (Oil & gas)
Hirsh Mfg. Co., Garland, Texas. (Natl., butane & mfg.)
Houston Blow Pipe & Sheet Metal Works. Houston, Texas. (Gas)
Independence Stove & Mfg. Co., Independence, Mo. (Gas)
Inland Steel Container Co., Chicago, Ill. (Gas)
International Oil Burner Co., St. Louis, Mo. (Oil)
Jackes-Evans Mfg. Co., St. Louis, Mo.
Kilbury Mfg. Co., Inc., Lawndale, Calif. (Gas)
Kresky Mfg. Co., Inc., Petaluma, Calif. (Oil)

Kresno-Stamm Mfg. Co., Palisades Park, N. J. (Oil)
Laco Oil Burner Co., Inc., Griswold, Iowa. (Oil)
Lasko Metal Products, Inc., West Chester, Pa. (Gas)
Little Burner Co., Inc., H. C., San Rafael, Calif. (Oil & Gas)
Lonergan Mfg. Co., Albion, Mich. (Oil & gas)
Magic Chef, Inc., St. Louis, Mo. (Oil & gas)
Martin Stamping & Stove Co., Huntsville, Ala. (Gas)
Moore Div., Conlon-Moore Corp., Joliet, Ill. (Coal, Oil, Gas)
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
Mulkey Co., J. F., Detroit, Mich. (Trailer)
National Gas Equipment Co., Inc., Terrell, Texas. (Gas)
Oakland Foundry Co., Belleville, Ill.
Ohio Foundry & Mfg. Co., Steubenville, Ohio. (Gas)
Ohio Stove Co., Portsmouth, Ohio. (Coal)
Perfection Stove Co., Cleveland, Ohio. (Oil & gas)
Pernot Corp., Norwalk, Calif. (Oil)
Phillips & Buttorff Mfg. Co., Nashville, Tenn. (Gas)
Portland Stove Foundry Co., Portland, Maine.
Premier Stove Co., Belleville, Ill. (Gas)
Quad Stove Mfg. Co., Columbus, Ohio. (Gas)
Queen Stove Works, Inc., Albert Lea, Minn. (Oil & Gas)
Quincy Stove Mfg. Co., Quincy, Ill. (Oil & gas)
Reznor Mfg. Co., Mercer, Pa. (Gas)
Rheem Mfg. Co., New York, N. Y. (Gas)
Rhoades Industries, Inc., Fargo, N. Dak. (Coal)
Samuel Stamping & Enameling Co., Chattanooga, Tenn. (Gas)
Schoedinger, F. O., Columbus, Ohio. (Gas & LP gas)
Silent Sioux Corp., Orange City, Iowa. (Oil & gas)
Southern Aircraft Co., Garland, Dallas Co., Texas. (Gas)
Spark Stove Co., Inc., Oakland, Calif. (Oil)
Superior Mfg. Co., Pittsburgh, Pa. (Gas)
Surface Combustion Corp., Toledo, Ohio. (Gas)
Temco, Inc., Nashville, Tenn.
Tesco, Inc., Tulsa, Okla. (Gas)
Therm Oil Burner Co., Seattle, Wash. (Oil)
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. (Electric)
United States Stove Co., South Pittsburg, Tenn. (Gas)
Vacuum Gas Burner Corp., Olean, N. Y. (Gas)
Viking Mfg. Corp., Cleveland, Ohio. (Oil)
Washington Stove Works, Everett, Wash. (Wood)
Williams Radiator Co., Glendale, Calif. (Gas)

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, FLOOR INSTALLATION, GAS FIRED

Airtherm Mfg. Co., St. Louis, Mo.
American Blower Corp., Detroit, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
Dravo Corp., Pittsburgh, Pa.
National Heater Co., St. Paul, Minn.
Norwalk Air Conditioning Corp., South Norwalk, Conn.

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, SUSPENDED INSTALLATION, GAS FIRED

Automatic Gas Equipment Co., Pittsburgh, Pa.
Carrier Corp., Syracuse, N. Y.
Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Dravo Corp., Pittsburgh, Pa.
General Gas Light Co., Kalamazoo, Mich.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Henry Furnace Co., Medina, O.
Ilg Electric Ventilating Co., Chicago, Ill.
Kilbury Mfg. Co., Inc., Lawndale, Calif.
Modine Mfg. Co., Racine, Wis.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Norman Products Co., Inc., Columbus, O.
Olsen Mfg. Co., The C. A., Elyria, O.
Olson & Co., Arthur A., Canfield, O.
Reznor Mfg. Co., Mercer, Pa.
Roberts-Gordon Appliance Co., Buffalo, N. Y.
Surface Combustion Corp., Toledo, O.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Appliance Corp., Los Angeles, Calif.
Vacuum Gas Burner Corp., Olean, N. Y.

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, FLOOR INSTALLATION, OIL FIRED

Airtherm Mfg. Co., St. Louis, Mo.
American Foundry & Furnace Co., Bloomington, Ill.
Dravo Corp., Pittsburgh, Pa.
Mueller Furnace Co., L. J., Milwaukee, Wis.
National Heater Co., St. Paul, Minn.
Norwalk Air Conditioning Corp., South Norwalk, Conn.
Olson & Co., Arthur A., Canfield, O.
Weatherall Engineers, Inc., Providence, R. I.

HEATERS, UNIT, WITHOUT DUCTS ATTACHED, SUSPENDED INSTALLATION, OIL FIRED

Air Conditioning Engineering Co., Cambridge, Mass.
Delta Heating Corp., Trenton, N. J.
Dravo Corp., Pittsburgh, Pa.
National Heater Co., St. Paul, Minn.
Olson & Co., Arthur A., Canfield, O.

HEATERS, UNIT, FOR INSTALLATIONS REQUIRING DUCTWORK

See Furnaces, Forced Warm Air

HEATING COILS

See Coils, Heating

HOISTS, HAND AND POWER

American Engineering Co., Philadelphia, Pa. (Power)
American MonoRail Co., Cleveland, Ohio. (Electric)
Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Chicago Pneumatic Tool Co., New York, N. Y. (Power)
Chisholm-Moore Hoist Corp., Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Cleveland Crane & Engineering Co., Wickliffe, Ohio. (Hand & electric)
Detroit Hoist & Machine Co., Detroit, Mich.
Electro Lift, Inc., New York, N. Y. (Electric)
Euclid Crane & Hoist Co., Euclid, Ohio. (Electric)
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa. (Hand & electric)
Harnischfeger Corp., Milwaukee, Wis. (Electric)
Harrington Co., Philadelphia, Pa. (Hand & electric)
Industrial Brownhoist Corp., Bay City, Mich.
Lisbon Hoist & Crane Co., Lisbon, Ohio. (Electric)
Louden Machinery Co., Fairfield, Iowa.
Lug-All Co., The, Wynnewood, Pa.
McCollum Hoist & Mfg. Co., Downers Grove, Ill.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio. (Hand & power)
Philadelphia Chain Block & Mfg. Co., Inc., Philadelphia, Pa.
Reading Crane & Hoist Corp., Reading, Pa. (Hand & power)
Robbins & Myers, Inc., Springfield, Ohio. (Hand & power)
Round Bridgeport Chain & Mfg. Co., Bridgeport, Conn. (Hand)
Shepard Niles Crane & Hoist Corp., Montour Falls, N. Y.
Stephens-Adamson Mfg. Co., Aurora, Ill.
Thor Power Tool Co., Aurora, Ill. (Power)
Webb Co., Jervis B., Detroit, Mich.
Whiting Corp., Harvey, Ill. (Electric)
Wright Hoist Div. American Chain & Cable Co., York, Pa.
Yale & Towne Mfg. Co., Philadelphia, Pa.

HOODS, PLASTIC

Heil Process Equipment Corp., Cleveland, O.
Stanthony Corp., Burbank, Calif.
Van Dorn Iron Works, Cleveland, O.

HOODS, DRAFT, GAS

See Draft Diverters, Gas Heaters

HOSE AND FITTINGS, METAL, FLEXIBLE

Aeroquip Corp., Jackson, Mich.
Everhot Products Co., Chicago, Ill.
Flexaust Co., New York, N. Y. (Non-metallic)
Flexonics Corp., Maywood, Ill.
Hunt & Son, Inc., C. B., Salem, Ohio.
Packless Metal Hose, Inc., New Rochelle, N. Y.
Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa
Seamless Co., Inc., Long Island City, N.Y.
Titeflex, Inc., Newark, N. J.
United Metal Hose Co., Inc., Long Island City, N. Y.
Uniflex Metal Hose Corp., Springfield, Mass.

HOUSINGS, BLOWER AND FAN

Air Controls, Inc., Cleveland, Ohio.
Brundage Co., Kalamazoo, Mich.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill. (Propeller)
Clarage Fan Co., Kalamazoo, Mich. (Blower)

Commercial Shearing & Stamping Co., Youngstown, Ohio. (Blower & fan)
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Detroit Stamping Co., Detroit, Mich. (Blower)
Hastings Air Conditioning Co., Inc., Hastings, Nebr. (Blower)
Jan-Air, Inc., Richmond, Ill. (Blower, cast iron)
Lau Blower Co., Dayton, Ohio. (Blower)
Martin Fan & Blower Co., Chicago, Ill.
Nelson Products, Herman, American Air Filter Co., Inc., Louisville, Ky.
Northern Blower Co., Cleveland, Ohio. (Blower)
Revcor, Carpentersville, Ill. (Blower)
Sandberg Mfg. Co., Portland, Ore. (Blower)
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utica Products, Inc., Utica, N. Y.
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass. (Blower & fan)

HUMIDIFIER FITTINGS

See Fittings, Humidifier, Water Line

HUMIDIFIER VALVES

See Valves, Humidifier, Water Level

HUMIDIFIERS, FURNACE, AUTOMATIC, EVAPORATIVE

Auto-Flo Corp., Detroit, Mich.
Automatic Humidifier Co., Cedar Falls, Iowa.
Bettinger Corp., Waltham, Mass.
Char-Gale Mfg. Co., Minneapolis, Minn.
Cleveland Humidifier Co., Cleveland, Ohio.
Econo-Matic Products Co., Inc., Detroit, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Pfening Co., Fred D., Columbus, Ohio.
Scoville Mfg. Co., Waterville, Conn.
Skilbeck Mfg. Co., Kenosha, Wis.
Skuttle Mfg. Co., Milford, Mich.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.

HUMIDIFIERS, FURNACE, AUTOMATIC, SPRAY

Century Engineering Corp., Cedar Rapids, Iowa.
Handelan Washed Air Co., Minneapolis, Minn.
Little Giant Vaporizer Co., Oklahoma City, Okla.
Maid-O'Mist, Inc., Chicago, Ill.
Pollenex, Chicago, Ill.
Somers, Inc., H. J., Detroit, Mich. (Humidifying system)
Spray Engineering Co., Somerville, Mass.
Spraying Systems Co., Chicago, Ill.
Walton Laboratories, Inc., Irvington, N. J.
Water Cooling Corp., New York, N. Y.

HUMIDIFIERS, PORTABLE

Daffin Mfg. Co., Lancaster, Pa.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Walton Laboratories, Inc., Irvington, N. J.

HUMIDISTATS

See Controls

HUMIDITY RECORDERS

See Recorders, Humidity

HYGROMETERS

American Instrument Co., Inc., Silver Spring, Md.
Bristol Co., Waterbury, Conn.
Fee and Stemwedel, Inc., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md
G. M. Mfg. Co., New York, N. Y.
General Scientific Equipment Co., Philadelphia, Pa.
H-B Instrument Co., Philadelphia, Pa.
Johnson Service Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

INCINERATORS

Autogas Co., Chicago, Ill.
Bowser, Inc., Cairo, Ill. (Gas fired)
Calcinator Corp., Bay City, Mich.
Cole Hot Blast Mfg. Co., Chicago, Ill.
Coroaire Heater Corp., Cleveland, O.
Cribben and Sexton Co., Chicago, Ill.
Donley Bros. Co., Cleveland, O.
Duo-Therm Div., Motor Wheel Corp., Lansing, Mich.
Gasinator Mfg. Co., Cleveland, O.
Gas-Posall Corp., Cleveland, O.
General Engineering Co., Bay City, Mich.
Goder Incinerator Corp., Chicago, Ill.
Heimbach Incinerator Mfg. Co., St. Paul, Minn.
Henry Furnace Co., Medina, O.
Herrick Grate Co., Geo. S., Syracuse, N. Y.
Holland Furnace Co., Holland, Mich.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Incinerator Products Co., Detroit, Mich.
Kerner Incinerator Div., Morse-Boulger Destructor Co., New York, N.Y.
Locke Stove Co., Kansas City, Mo.
Lyons, Edward W., Youngstown, O.
Majestic Co., Inc., Huntington, Ind.
Martin Stamping & Stove Co., Huntsville, Ala.
Modern Controls Corp., Centerline, Mich.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Nelson Industries, Pittsburgh, Pa.
Olsen Mfg. Co., C. A., Elyria, O.
Reznor Mfg. Co., Mercer, Pa.
Schwab Furnace Co., Milwaukee, Wis.
Skuttle Mfg. Co., Milford, Mich.
Standard Fuel Engineering Co., Detroit, Mich.
Syracuse Alloy Metals Corp., Syracuse, N. Y.

INDICATING THERMOMETERS

See Thermometers, Indicating

INSULATING CEMENT

See Cement, Insulating

INSULATION, BUILDING

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Rockwool)
Alfol Div., Reflectal Corp., New York, N. Y. (Blanket)
Alton Mineral Wool Insulation Co., St. Louis, Mo. (Loose, granulated & batts)
American Flange & Mfg. Co., Inc., New York, N. Y. (Reflective)
American Hair & Felt Co., Chicago, Ill. (Hair)
Armstrong Cork Co., Lancaster, Pa.
Bache & Co., Semon, New York, N. Y. (Glass)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Barnhardt Mfg. Co., Charlotte, N. C.
Barrett Div. Allied Chemical & Dye Corp., New York, N. Y. (Rockwool)
Berger Furnace Mfg. Co., Pittsburgh, Pa. (Rockwool)
Cabot, Inc., Samuel, Boston, Mass.
Carey Co., Philip, Cincinnati, Ohio. (Mineral wool)
Celotex Corp., Chicago, Ill.
Certain-teed Products Corp., Ardmore, Pa. (Glass fiber)
Chamberlin Co. of America, Detroit, Mich. (Rockwool)
Coast Insulating Products, Los Angeles, Calif. (Granulated and batts)
Cork Insulation Co., New York, N. Y. (Cork)
Eagle-Picher Co., Cincinnati, Ohio. (Mineral Wool)
Flintkote Co., New York, N. Y. (Fibre board & insulating wool)
Infra Insulation, Inc., New York, N. Y. (Accordion aluminum)
Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn. (Wood fibre)
Johns-Manville, New York, N. Y.
Johnston Foil Mfg. Co., St. Louis, Mo. (Paper backed foil)
Keasbey Co., Robert A., New York, N. Y. (Asbestos)
Kimberly-Clark Corp., Neenah, Wis.
Lehon Co., Chicago, Ill. (Paper)
Libbey-Owens-Ford Glass Co., Toledo, Ohio. (Fiber glass)

Lockport Cotton Batting Co., Lockport, N. Y. (Blanket)
Meadows, Inc., W. R., Elgin, Ill. (Cork & Asphalt)
Mundet Cork Corp., North Bergen, N. J. (Cork)
National Cork Co., Englewood, N. J. (Cork)
National Gypsum Co., Buffalo, N. Y. (Fiber board)
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Board & blanket)
Pacific Lumber Co., San Francisco, Calif. (Wood fiber)
Pittsburgh Corning Corp., Pittsburgh, Pa. (Cellular glass)
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular glass)
Plastergon Wall Board Co., Buffalo, N. Y.
Quaker State Metals Co., Lancaster, Pa. (Aluminum)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riverton Lime & Stone Co., Inc., Riverton, Va. (Mineral wool)
Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
Ruberoid Co., New York, N. Y. (Aluminum foil)
Silvercote Products, Inc., Chicago, Ill. (Reflective type)
Sisalkraft Co., Chicago, Ill. (Reflective)
Sprayo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
Standard Rolling Mills, Inc., Brooklyn, N. Y. (Reflective)
Tennessee Products & Chemical corp., Nashville, Tenn. (Mineral wool)
United Cork Cos., Kearney, N. J.
United States Gypsum Co., Chicago, Ill. (Mineral wool)
U. S. Mineral Wool Co., Stanhope, N. J. (Mineral wool)
U. S. Rock Wool Co., Salt Lake City, Utah. (Blowing wool, batt and blanket)
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Western Rock Wool Corp., Huntington, Ind. (Fill)
Wilson & Co., Inc., Chicago, Ill. (Hair, Felt)
Wilson, Inc., Grant, Chicago, Ill. (Rock Wool)
Wood Conversion Co., St. Paul, Minn.
Zonolite Co., Chicago, Ill.

INSULATION, DUCT

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Alfol Div. Reflectal Corp., New York, N. Y. (Aluminum foil)
American Hair & Felt Co., Chicago, Ill. (Hair felt)
Armstrong Cork Co., Lancaster, Pa.
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Cabot, Inc., Samuel, Boston, Mass.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Celotex Corp., Chicago, Ill.
Coast Insulating Products, Los Angeles, Calif. (rolls)
Cork Insulation Co., Inc., New York, N. Y. (Cork)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Felters Co., Inc., Boston, Mass. (Felt)
Glass Fibers, Inc., Toledo, O. (Glass fiber)
Gustin-Bacon Mfg. Co., Kansas City, Mo. (Glass fiber)
Hinde & Dauch Paper Co., Sandusky, Ohio.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Aircell cork & asbestos)
Keystone Asphalt Products Co., Chicago, Ill.
LaClede-Christy Clay Products Co., St. Louis, Mo.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. (Fiber glass)
Lockport Cotton Batting Co., Lockport, N. Y. (Blanket)
Minnesota Mining & Mfg. Co., St. Paul, Minn.
Mortell Co., J. W., Kankakee, Ill. (Cork coating)
Mundet Cork Corp., North Bergen, N. J. (Cork)
Munn and Steele, Inc., Newark, N. J. (Plastic)
National Cork Co., Englewood, N. J. (Cork)
National Gypsum Co., Buffalo, N. Y. (Rock Wool)
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Rigid & flexible with facings)
Pabco Products Inc., San Francisco, Calif. (Magnesia)
Pittsburgh Corning Corp., Pittsburgh, Pa. (Cellular glass)
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Cellular Glass)
Quigley Co., Inc., New York, N. Y.
Reflectal Corp., New York, N. Y. (Aluminum)
Refractory & Insulation Corp., New York, N. Y. (Inside duct lining)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Robinson Insulation Co., Great Falls, Mont.
Ruberoid Co., New York, N. Y. (Asbestos)
Sall Mountain Co., Hamilton, O. (Asbestos)
Sprayo-Flake Co., Chicago, Ill. (Mineral fiber & adhesive)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
United Cork Cos., Kearney, N. J.
U. S. Mineral Wool Co., Stanhope, N. J. (Mineral wool)
United States Rubber Co., New York, N. Y. (Sound deadening)
Western Felt Works, Chicago, Ill. (Felt)
Wilson & Co., Inc., Chicago, Ill. (Hair & felt)
Wilson, Inc., Grant, Chicago, Ill.
Wood Conversion Co., St. Paul, Minn.

INSULATION, FURNACE

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos, rockwool)
Alfol Div. Reflectal Corp., New York, N. Y. (Aluminum foil & asbestos combination)
Babcock & Wilcox Co., Refractories Div., New York, N. Y. (Firebrick, cement mixes)
Baldwin-Hill Co., Trenton, N. J. (Mineral wool)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos & magnesia)
Chicago Fire Brick Co., Chicago, Ill. (Mineral wool & plastic cement)
Coast Insulating Products, Los Angeles, Calif. (Plastic cement)
Eagle-Picher Co., Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Glass Fibers, Inc., Toledo, O. (Glass fiber)
Green Fire Brick Co., A. P., Mexico, Mo. (Mineral wool)
Gustin-Bacon Mfg. Co., Kansas City, Mo. (Glass fiber)
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keasby Co., Robert A., New York, N. Y. (Asbestos cement, magnesium blocks)
LaClede-Christy Clay Products Co., St. Louis, Mo. (Cement & blocks)
Norristown, Magnesia & Asbestos Co., Norristown, Pa.
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Foil faced)
Pabco Products Inc., San Francisco, Calif.
Plibrico Jointless Firebrick Co., Chicago, Ill. (Mineral Wool)
Quigley Co., Inc., New York, N. Y.
Refractory & Insulation Corp., New York, N. Y. (Block, blanket)
Robinson Insulation Co., Great Falls, Mont. (High temperature cement)
Ruberoid Co., New York, N. Y. (Asbestos)
Standard Asbestos Mfg. Co., Chicago, Ill. (Asbestos)
U. S. Mineral Wool Co., Stanhope, N. J. (Mineral wool)
U. S. Rock Wool Co., Salt Lake City, Utah. (Rock wool cement)
Western Mineral Products Co., Minneapolis, Minn. (Vermiculite)
Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

KITCHEN FANS

See Fans, Kitchen

LAMPS, GERMICIDAL

General Electric Co., Cleveland, Ohio.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Sperti Faraday, Inc., Cooper Hewitt Div., Cincinnati, O.
Westinghouse Electric Corp., Bloomfield, N. J.

LEAD SHEETS

See Sheets, Metal, Lead

LIFTS, SKYLIGHT

Biersach & Niedermeyer Co., Milwaukee, Wis.
Danzer Metal Works Co., Hagerstown, Md.
Levow, David, New York, N. Y. (Gearing)
Park City Cornice Works, Inc., Bridgeport, Conn.
Perkinson, William J., Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Weiss & Co., H., New York, N. Y.

LIMIT CONTROLS

See Controls, Limit

LININGS, CHIMNEY

Condensation Engineering Corp., Chicago, Ill. (Vitreous enamel)
Excelsior Steel Furnace Co., Chicago, Ill. (Stainless steel)
Wallace Co., William, Metalbestos Div., Belmont, Calif.

LINKS, FUSIBLE

Division Lead Co., Summit, Ill.
Empire Metal Co., Syracuse, N. Y.
Morse-Smith-Morse Co., Watertown, Mass.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Steffens-Amberg Co., Newark, N. J.
Westinghouse Electric Corp., Pittsburgh, Pa.

LOCK FORMING

See Machines, Lock Forming

LOUVERS AND SHUTTERS, AUTOMATICALLY OR MANUALLY CONTROLLED

Aerovent Fan Co., Inc., Piqua, O.
Air Controls, Inc., Cleveland, Ohio.
Air Conditioning Products Co., Detroit, Mich.
Airmaster Corp., Chicago, Ill.
Air & Refrigeration Corp., New York, N. Y.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Coolair Corp., Jacksonville, Fla.
American Steel Band Co., Pittsburgh, Pa.
American Warming & Ventilating Co., Toledo, Ohio.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Arlington Electric Co., St. Louis, Mo.
Babbin, Inc., New York, N. Y.
Barber-Colman Co., Rockford, Ill.
Belter Electric Mfg. Co., G. J., St. Louis, Mo.
Berns Mfg. Co., Chicago, Ill.
Bertram Co., Harvey P., Cincinnati, Ohio.
Biersach & Niedermeyer Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Burt Mfg. Co., Akron, Ohio.
Champion Blower & Forge Co., Lancaster, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Commercialaire, Inc., Brooklyn, N. Y.
Controlair Mfg. Co., Los Angeles, Calif.
Dual-Air Fan Corp., South Elgin, Ill.
Eagle-Picher Co., Cincinnati, Ohio.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Frigid, Inc., Brooklyn, N. Y.
General Blower Co., Morton Grove, Ill.
Hunter Fan & Ventilating Co., Memphis, Tenn.
International Engineering, Inc., Dayton, Ohio.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Lakewood Engineering & Mfg. Co., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Martin Fan & Blower Co., Chicago, Ill.
Maysteel Products, Inc., Milwaukee, Wis.
Meier Electric & Machine Co., Inc., Indianapolis, Ind.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Myers Electric Co., Inc., Pittsburgh, Pa.
Nelson Products, Herman, American Air Filter Co., Louisville, Ky.
Overly Mfg. Co., Greensburg, Pa.
Peerless Electric Co., Warren, Ohio.
Perkinson, William J., Chicago, Ill.
Reed Unit-Fans, Inc., New Orleans, La.
Riggin Metal Products, Kankakee, Ill.
Robertson Co., H. H., Pittsburgh, Pa.
Schwitzer-Cummins Co., Indianapolis, Ind.
Signal Electric Mfg. Co., Menominee, Mich.
Simpson Co., Oakland, Calif.
Sommerfeld Louvres, Inc., New York, N. Y.
Standard Stamping & Perforating Co., Chicago, Ill.
Steelcraft Mfg. Co., Rossmoyne, O.
Swartwout Co., Cleveland, Ohio.
Titus Mfg. Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.
Uno Ventilator Co., Malden, Mass.
Van Noorden Co., E., Boston, Mass.
Wing Mfg. Co., L. J., Linden, N.J.
Young Regulator Co., Cleveland, Ohio.

LOUVERS, STATIONARY

Aerovent Fan Co., Inc., Piqua, O.
Air Control Products, Inc., Coopersville, Mich.
American Foundry & Furnace Co., Bloomington, Ill.
American Steel Band Co., Pittsburgh, Pa.
American Warming & Ventilating Co., Toledo, Ohio.
Ammerman Co., C. L., Minneapolis, Minn.
Appleton Supply Co., Inc., Appleton, Wis. (End Wall)
Arex Co., Chicago, Ill.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Burt Mfg. Co., Akron, Ohio.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Commercialaire, Inc., Brooklyn, N. Y.
Donley Bros. Co., Cleveland, O.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Firecraft Corp., Chicago, Ill.
Frigid, Inc., Brooklyn, N. Y.
Hemphill Co., A. D., Lake City, Minn.
Inland Steel Products Co., Milwaukee, Wis.
Leslie Welding Co., Inc., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Molloy Machine Corp., Chicago, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Perkinson, William J., Chicago, Ill.
Robertson Co., H. H., Pittsburgh, Pa.
Simpson Co., Oakland, Calif.
Sommerfeld Louvres, Inc., New York, N. Y.
Steelcraft Mfg. Co., Rossmoyne, O.
Swartwout Co., Cleveland, Ohio.
Titus Mfg. Corp., Waterloo, Iowa.
United States Register Co., Battle Creek, Mich.
Uno Ventilator Co., Malden, Mass.
Waterloo Register Co., Inc., Waterloo, Ia.
Wilder Products Co., Springfield, O.

LOUVERS, SUN REFLECTING

Kawneer Co., Niles, Mich.

MACHINERY, SHEET METAL, REBUILT AND USED

Capacity 10 ga or lighter

Acme Equipment Co., Inc., Chicago, Ill.
Brooks Co., Inc., B. D., Boston, Mass.
Burns Machinery Co., F. W., Milwaukee, Wis.
Federal Machinery Co., New York, N. Y. (Sheet Metal)
Harris Machinery Co., Minneapolis, Minn.
Hyman & Sons, Joseph, Philadelphia, Pa.
Interstate Machinery Co., Inc., Chicago, Ill.
Machine Rebuilding Co., Detroit, Mich.
Machinery Liquidating Co., Detroit, Mich.
Milton Equipment Co., Philadelphia, Pa.
Potts-Farrington Co., Philadelphia, Pa.
Reiner & Campbell Co., Inc., Newark, N. J.
St. Louis Tool Co., St. Louis, Mo.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.

MACHINES, SHEET METAL WORKING, ANGLE IRON BENDING

National Metal Fabricators, Chicago, Ill.

MACHINES, SHEET METAL WORKING, BAR FOLDING, HAND

Barth Mfg. Co., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis, Mo.
Smith, R. E., Waukegan, Ill.

MACHINES, SHEET METAL WORKING, BEADING, HAND

Barth Mfg. Co., Milldale, Conn.
Kraus Mfg. Co., Chas. E., Louisville, Ky.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.
Robertson, F. L., Buffalo, N. Y.

MACHINES, SHEET METAL WORKING, BEADING, POWER

Baker Bros., Inc., Toledo ,Ohio.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Fallsington Mfg. Co., Fallsington, Pa.
Kling Bros. Engineering Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Swain Mfg. Co., Fred J., St. Louis, Mo.
Wales-Strippit Corp., North Tonawanda, N. Y.

MACHINES, SHEET METAL WORKING, BENDERS

Bath Company, Cyril, Cleveland, Ohio. (Contour formers)
Champion Blower & Forge Co., Lancaster, Pa.

Connors & Davis Sales Corp., West Springfield, Mass.
Excelsior Tool & Machine Co., East St. Louis, Ill. (Circular bending)
Hendley & Whittemore Co., Beloit, Wis.
Hossfeld Mfg. Co., Winona, Minn.
Kane & Roach, Inc., Syracuse, N. Y.
Kling Bros. Engineering Works, Chicago, Ill.
Knights Co., James, Sandwich, Ill.
Martens & Stormoen, West Quincy, Mass.
Merchandising & Manufacturing Associates, Inc., Lancaster, Pa. (Shrinkers & stretchers)
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pedrick Tool & Machine Co., Philadelphia, Pa.
Smith, R. E., Waukegan, Ill.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, BRAKES, HAND

Acme Equipment Co., Inc., Chicago, Ill.
Barth Mfg. Co., Milldale, Conn.
Berkroy Products Co., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
G. & S. Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.
Ward Machinery Co., Chicago, Ill.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, BRAKES, PORTABLE

Berkroy Products Co., Burbank, Calif.
Dreis & Krump Mfg. Co., Chicago, Ill.
Fayette Mfg. Co., Fayette, O.
G. & S. Machine Shop, Detroit, Mich.
Hallmor, Inc., Bridgeville, Pa.
Harris, A. R., Hammond, Ind.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.
Vyke Brake Co., Omaha, Nebr.
Webb Machine & Tool Co., Imperial, Pa.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, BRAKES, POWER

Airtherm Mfg. Co., St. Louis, Mo.
Bath Co., Cyril, Solon, O.
Cincinnati Shaper Co., Cincinnati, Ohio.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Dreis Co., Ltd., Edward J., San Carlos, Calif. (Air)
Dreis & Krump Mfg. Co., Chicago, Ill.
Heartley Machine & Tool Co., Toledo, Ohio.
Munton Mfg. Co., Franklin Park, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Service Machine Co., Inc., Elizabeth, N. J.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.
Verson Allsteel Press Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, BRAKES, PRESS (AND DIES)

Airtherm Mfg. Co., St. Louis, Mo.
American Actuator Corp., New York, N. Y.
Bath Co., Cyril, Solon, O.
Connors & Davis Sales Corp., West Springfield, Mass.
Dreis & Krump Mfg. Co., Chicago, Ill.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Service Machine Co., Inc., Elizabeth, N. J.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.
Verson Allsteel Press Co., Chicago, Ill.

MACHINES, SHEET METAL WORKING, BURRING, HAND

Barth Mfg. Co., Milldale, Conn.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, BURRING, POWER

Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotor Tool Co., Cleveland, Ohio.
Thor Power Tool Co., Aurora, Ill.

MACHINES, SHEET METAL WORKING, CLEAT BENDING, HAND

Niagara Machine & Tool Works, Buffalo, N. Y.
Smith, R. E., Waukegan, Ill.

MACHINES, SHEET METAL WORKING, COMBINATION, HAND

Beading, Burring, Turning, Wiring, etc.

Barth Mfg. Co., Milldale, Conn.
Ingram Machinery Co., Picher, Okla.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, COMBINATION, POWER

Beading, Burring, Turning, Wiring, etc.

Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Wysong & Miles Co., Greensboro, N. C.

MACHINES, SHEET METAL WORKING, CRIMPING, HAND

Barth Mfg. Co., Milldale, Conn.
Fallsington Mfg. Co., Fallsington, Pa.
Ingram Machinery Co., Picher, Okla.
Kraus Mfg. Co., Chas. E., Louisville, Ky.
Maxant Button & Supply Co., Chicago, Ill.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Packham Crimper Co., Mechanicsburg, Ohio.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, CRIMPING, POWER

Fallsington Mfg. Co., Fallsington, Pa.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Swaine Mfg. Co., Fred J., St. Louis, Mo.

MACHINES, SHEET METAL WORKING, DOUBLE SEAMING, ROOF, POWER

Flagler Corp., The, Detroit, Mich.
Lockformer Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Swaine Mfg. Co., Fred J., St. Louis, Mo.

MACHINES, SHEET METAL WORKING, ELBOW, HAND

Barth Mfg. Co., Milldale, Conn.
Kane & Roach, Inc., Syracuse, N. Y. (Downspout elbows)
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, ELBOW, POWER

Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, FILING

DoALL Co., Des Plaines, Ill.
Grob Bros., Inc., Grafton, Wis.

MACHINES, SHEET METAL WORKING, FLANGING, HAND

Barth Mfg. Co., Milldale, Conn.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Lockformer Co., Chicago, Ill.

Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
"Original" Metal Flanging Machine Works, Seattle, Wash.
Peck, Stow & Wilcox Co., Southington, Conn.
Smith, R. E., Waukegan, Ill.
Ward Machinery Co., Chicago, Ill.
Weiss & Co., H., New York, N. Y.

MACHINES, SHEET METAL WORKING, FLANGING, POWER

Baker Bros., Inc., Toledo, Ohio.
Bath Co., Cyril, Solon, O.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Flagler Corp., The, Detroit, Mich.
Kling Bros. Engineering Works, Chicago, Ill.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Pacific Industrial Mfg. Co., Oakland, Calif.
Peck, Stow & Wilcox Co., Southington, Conn.
Swaine Mfg. Co., Fred J., St. Louis, Mo.
Ward Machinery Co., Chicago, Ill.
Whiting Corp., Harvey, Ill.

MACHINES, SHEET METAL WORKING, GROOVING, HAND

Barth Mfg. Co., Milldale, Conn.
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, GROOVING, POWER

Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Standard Power Groove Machine Corp., New York, N. Y.

MACHINES, SHEET METAL WORKING, GUTTER FORMING, HAND

Kane & Roach, Inc., Syracuse, N. Y. (Power)
Robertson, F. L., Buffalo, N. Y.
Stamco, Inc., New Bremen, Ohio.

MACHINES, SHEET METAL WORKING, LOCK FORMING, POWER

Connors & Davis Sales Corp., West Springfield, Mass.
Flagler Corp., The, Detroit, Mich.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.

MACHINES, SHEET METAL WORKING, NIBBLING, HAND

Beverly Shear Mfg. Co., Chicago, Ill.
Fenway Machine Sales Co., Inc., Philadelphia, Pa.
Heinrich Tools, Inc., Racine, Wis.
Nord International Corp., Denville, N. J.

MACHINES, SHEET METAL WORKING, NIBBLING, POWER

Baker Bros., Inc., Toledo, Ohio.
Berkroy Products Co., Burbank, Calif.
Campbell Machine Div. American Chain & Cable Co., Inc., Bridgeport, Conn.
H. A. Mfg. Co., York, Pa.
Libert Machine Co., Green Bay, Wis.
Nord International Corp., Denville, N. J.
St. Louis Tool Co., St. Louis, Mo.
Savage Co., W. J., Knoxville, Tenn.
Service Machine Co., Inc., Elizabeth, N. J.
Thor Power Tool Co., Aurora, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.

MACHINES, SHEET METAL WORKING, NOTCHING, HAND

Engel Sheet Metal Equipment, Inc., St. Louis, Mo.
Fallsington Mfg. Co., Fallsington, Pa. (Also power)
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Merchandising and Mfg. Associates, Inc., Lancaster, Pa.
Nord International Corp., Denville, N. J.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, PAN FORMING

Follansbee Steel Corp., Pittsburgh, Pa.
Roliton of America, Inc., Phoenix, Ariz.

MACHINES, SHEET METAL WORKING, PITTSBURGH LOCK FORMING

Flagler Corp., The, Detroit, Mich.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.

MACHINES, SHEET METAL WORKING, PITTSBURGH LOCK OPENING

Birks Mfg. Co., Meriden, Conn.
Bristol Metal Working Equipment, Hartford, Conn.
Maplewood Machinery Co., Chicago, Ill.

MACHINES, SHEET METAL WORKING, PRESSES

Airtherm Mfg. Co., St. Louis, Mo.
Baker Bros., Inc., Toledo, Ohio. (Die cushions)
Bath Co., Cyril, Solon, O.
Bertsch & Co., Cambridge City, Ind.
Benchmaster Mfg. Co., Gardena, Calif.
Bliss Co., E. W., Canton, Ohio.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cincinnati Shaper Co., Cincinnati, Ohio.
Clearing Machine Corp., Chicago, Ill. (Presses)
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Davis & Son Machine Works, Los Angeles, Calif.
Diamond Machine Tool Co., Los Angeles, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Dreis & Krump Mfg. Co., Chicago, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Federal Machine & Welder Co., Warren, Ohio.
Heidrich-Nourse Co., Los Angeles, Calif.
Henry & Wright Div. Emhart Mfg. Co., Hartford, Conn.
Highland Engineering Co., Santa Monica, Calif.
Johnson Machine & Press Corp., Elkhart, Ind.
Leslie Welding Co., Inc., Chicago, Ill.
Munton Mfg. Co., Franklin Park, Ill.
New Albany Machine Mfg. Co., New Albany, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Pacific Industrial Mfg. Co., Oakland, Calif.
Service Machine Co., Inc., Elizabeth, N. J.
Swaine Mfg. Co., Fred J., St. Louis, Mo.
Verson Allsteel Press Co., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.
Ward Machinery Co., Chicago, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.
Wilson, K. R., Buffalo, N. Y. (Presses)
Wysong & Miles Co., Greensboro, N.C.
Zeh & Hahnemann Co., Newark, N. J.

MACHINES, SHEET METAL WORKING, PUNCHES, POWER

Bath Co., Cyril, Solon, O.
Beatty Machine & Mfg. Co., Hammond, Ind.
Bliss Co., E. W., Canton, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Diamond Machine Tool Co., Los Angeles, Calif.
Doelger & Kirsten, Inc., Milwaukee, Wis.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Fallsington Mfg. Co., Fallsington, Pa.
Hendley & Whittemore Co., Beloit, Wis.
Henry & Wright Div. Emhart Mfg. Co., Hartford, Conn.
Highland Engineering Co., Santa Monica, Calif.
Kling Bros. Engineering Works, Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Ia.
Maxant Button & Supply Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Progressive Welder Sales Co., Detroit, Mich.
Rotex Punch Co., Inc., San Leandro, Calif.
Royersford Foundry & Machine Co., Royersford, Pa.

Swaine Mfg. Co., Fred J., St. Louis, Mo.
Verson Allsteel Press Co., Chicago, Ill.
Wales-Strippit Corp., North Tonawanda, N. Y.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.

MACHINES, SHEET METAL WORKING, ROD CUTTING

O'Neil-Irwin Mfg. Co., Lake City, Minn.

MACHINES, SHEET METAL WORKING, ROLL FORMING, POWER

For Mouldings and Shapes

Dahlstrom Machine Works, Chicago, Ill.
Flagler Corp., The, Detroit, Mich.
Kane & Roach, Inc., Syracuse, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Yoder Co., Cleveland, Ohio.

MACHINES, SHEET METAL WORKING, SAWS, BAND, SHEET METAL CUTTING

Bett-Marr Mfg. Co., Hopkins, Minn.
Delta Power Tool Div., Rockwell Mfg. Co., Pittsburgh, Pa.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Grob Bros., Inc., Grafton, Wis.
Millers Falls Co., Greenfield, Mass.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Tannewitz Works, Grand Rapids, Mich.
Wells Mfg. Corp., Three Rivers, Mich.

MACHINES, SHEET METAL WORKING, SAWS, HACK, POWER

Alpha Tool & Supply Co., Westwood, N. J.
Champion Blower & Forge Co., Lancaster, Pa.
Disston & Sons, Inc., Henry, Philadelphia, Pa.
DoAll Co., Des Plaines, Ill.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Milwaukee Electric Tool Corp., Milwaukee, Wis.
Racine Hydraulics & Machinery, Inc., Racine, Wis.
Robertson, F. L., Buffalo, N. Y.
Royersford Foundry & Machine Co., Royersford, Pa.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)
Skil Corporation, Chicago, Ill.
Thor Power Tool Co., Aurora, Ill.

MACHINES, SHEET METAL WORKING, SEAMING, HAND

Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Weiss & Co., H., New York, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, SEAMING, POWER

Bliss Co., E. W., Detroit, Mich.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Lockformer Co., Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Progressive Welder Sales Co., Detroit, Mich.
Stamco, Inc., New Bremen, Ohio.
Swaine Mfg. Co., Fred J., St. Louis, Mo.

MACHINES, SHEET METAL WORKING, SETTING DOWN, HAND

Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, SETTING DOWN, POWER

Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, SHEARS, CIRCLE, HAND

Barth Mfg. Co., Milldale, Conn.
Berkroy Products Co., Burbank, Calif.
Beverly Shear Mfg. Co., Chicago, Ill.
Klenk's Aviation Snips, Wilmington, Del.
McCoy Products Co., Salt Lake City, Utah.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, SHEARS, CIRCLE, POWER

Baker Bros., Inc., Toledo, Ohio.
H. A. Mfg. Co., York, Pa.
Kling Bros. Engineering Works, Chicago, Ill.
Libert Machine Co., Green Bay, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Wales-Strippit Corp., North Tonawanda, N. Y.
Whiting Corp., Harvey, Ill.

MACHINES, SHEET METAL WORKING, SHEARS, ELECTRIC, PORTABLE

Black & Decker Mfg. Co., Towson, Md.
Merchandising & Manufacturing Associates, Inc., Lancaster, Pa.
(Electric or pneumatic drill attachment)
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Skil Corporation, Chicago, Ill.
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
York Electric & Machine Co., York, Pa.

MACHINES, SHEET METAL WORKING, SHEARS, ROTARY, SLITTING, HAND

Barth Mfg. Co., Milldale, Conn.
Berkroy Products Co., Burbank, Calif.
Champion Blower & Forge Co., Lancaster, Pa.
Engel Sheet Metal Equipment, Inc., St. Louis, Mo.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.

MACHINES, SHEET METAL WORKING, SHEARS, ROTARY, SLITTING, POWER

Baker Bros., Inc., Toledo, Ohio.
Bliss Co., E. W., Canton, Ohio.
Kling Bros. Engineering Works, Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Knives)
Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
Wheelock Co., Geo. F., Birmingham, Ala.
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.

MACHINES, SHEET METAL WORKING, SHEARS, SQUARING, FOOT

Acme Equipment Co., Inc., Chicago, Ill.
Barth Mfg. Co., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Diamond Machine Tool Co., Los Angeles, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Highland Engineering Co., Santa Monica, Calif.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

MACHINES, SHEET METAL WORKING, SHEARS, SQUARING, POWER

Acme Equipment Co., Inc., Chicago, Ill.
Barth Mfg. Co., Milldale, Conn.
Bertsch & Co., Cambridge City, Ind.
Bliss & Co., E. W., Canton, Ohio.
Cincinnati Shaper Co., Cincinnati, Ohio.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Diamond Machine Tool Co., Los Angeles, Calif.
Dreis Co., Ltd., Edward J., San Carlos, Calif.
Engel Sheet Metal Equipment, Inc., St. Louis, Mo.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Frederick Iron & Steel, Inc., Frederick, Md.
Johnson Machine & Press Corp., Elkhart, Ind.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Simonds Saw & Steel Co., Fitchburg, Mass. (Blades)

Stamco, Inc., New Bremen, Ohio.
Thomas Machine Mfg. Co., Pittsburgh, Pa. (¼ in. and heavier)
Whitney Metal Tool Co., Rockford, Ill.
Wysong & Miles Co., Greensboro, N. C.

MACHINES, SHEET METAL WORKING, SLIP ROLL FORMING, HAND

Barth Mfg. Co., Milldale, Conn.
Berkroy Products Co., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Frederick Iron & Steel, Inc., Frederick, Md.
Hendley & Whittemore Co., Beloit, Wis.
Milton Equipment Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
San Angelo Foundry & Machine Co., Mt. Vernon, Ill.
Wysong & Miles Co., Greensboro, N. C.

MACHINES, SHEET METAL WORKING, SLIP ROLL FORMING, POWER

Bertsch & Co., Cambridge City, Ind.
Hendley & Whittemore Co., Beloit, Wis.
Kling Bros. Engineering Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Milton Equipment Co., Philadelphia, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Reed Engineering Co., Carthage, Mo.
San Angelo Foundry & Machine Co., Mt. Vernon, Ill.
Wysong & Miles Co., Greensboro, N. C.

MACHINES, SHEET METAL WORKING, SLITTING, HAND

Barth Mfg. Co., Milldale, Conn.
Berkroy Products Co., Burbank, Calif.
Bertsch & Co., Cambridge City, Ind.
Beverly Shear Mfg. Co., Chicago, Ill.
Buffalo Forge Co., Buffalo, N. Y.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Ward Machinery Co., Chicago, Ill.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.

MACHINES, SHEET METAL WORKING, SLITTING, POWER

Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Canton, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Dahlstrom Machine Works, Chicago, Ill.
Engel Sheet Metal Equipment, Inc., St. Louis, Mo.
Hendley & Whittemore Co., Beloit, Wis.
Kane & Roach, Inc., Syracuse, N. Y.
Libert Machine Co., Green Bay, Wis.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
St. Louis Tool Co., St. Louis, Mo.
Stamco, Inc., New Bremen, Ohio.
Whiting Corp., Harvey, Ill.
Wilder Mfg. Co., Inc., Carmel, Calif.
Yoder Co., Cleveland, Ohio.

MACHINES, SHEET METAL WORKING, WIRING, HAND

Barth Mfg. Co., Milldale, Conn.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MACHINES, SHEET METAL WORKING, WIRING, POWER

Callahan Can Machine Co., Inc., Brooklyn, N. Y.
Maplewood Machinery Co., Chicago, Ill.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.

MALLETS, METAL WORKING

Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Chicago Rawhide Mfg. Co., Chicago, Ill. (Rawhide)
Densewood Co., Elkhorn, Wis. (Wood)
Division Lead Co., Summit, Ill. (Lead)
Goodrich Co., B. F., Akron, Ohio. (Rubber)
Greene, Tweed & Co., New York, N. Y. (Plastic, rawhide, composition, copper & babbitt)
Lignum-Vitae Products Corp., Jersey City, N. J.
Maplewood Machinery Co., Chicago, Ill.
New Plastic Corp., Hollywood, Calif. (Plastic)
Niagara Machine & Tool Works, Buffalo, N. Y. (Hickory)
Republic Rubber Div. Lee Rubber & Tire Corp., Youngstown, Ohio. (Rubber)
Southwest Mfg. Co., Santa Ana, Calif. (Plastic tipped)
Stanley Tools, New Britain, Conn. (Soft face hammers)
Stossel & Sons Co., Carl, Front Royal, Va. (Hickory & dogwood)

MARQUEES, PREFABRICATED

See Canopies, Prefabricated

MATS, EVAPORATIVE COOLER

Alton Mfg. Co., Dallas, Texas (Aspen Wood)
Morey, Dan, Los Angeles, Calif. (Aspen)
Palmer Mfg. Corp., Phoenix, Ariz. (Shredded Aspen Wood)

METAL CEILINGS

See Ceilings, Metal

METAL HOSE

See Hose and Fittings, Metal

METAL SPRAY GUNS

See Guns, Spray, Metals

METAL STAMPINGS

See Stampings, Metal

METALS, PERFORATED, SHEET AND PLATE

Auer Register Co., Cleveland, O.
Beckley Perforating Co., Garwood, N. J.
Belmont Smelting & Refining Wks,. Inc., Brooklyn, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Perforating Co., Chicago, Ill.
Cross Engineering Co., Carbondale, Pa.
Diamond Mfg. Co., Wyoming, Pa.
Division Lead Co., Summit, Ill. (Lead-tin)
Erdle Perforating Co., Rochester, N. Y.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hendrick Mfg. Co., Carbondale, Pa.
Johnston & Chapman Co., Chicago, Ill.
Littleford Bros., Inc., Cincinnati, Ohio.
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.
Nortmann-Duffke Co., Milwaukee, Wis.
Penn Metal Co., Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Rigidized Metals Corp., Buffalo, N. Y.
Standard Stamping & Perforating Co., Chicago, Ill.
Superior Metal Fabricating Co., Niles, Ohio.
Wheeling Corrugating Co., Wheeling, W. Va. (Expanded)

METERS, AIR VELOCITY, DIRECT READING

Anemostat Corp. of America, New York, N. Y.
Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Detroit Air Conditioning Service Co., Nashville, Mich.
Illinois Testing Laboratories, Inc., Chicago, Ill.
Taylor Instrument Companies, Rochester, N. Y.

MONORAIL SYSTEMS

Track, Trolley, Hoist, Accessories

American MonoRail Co., Cleveland, Ohio.
Chicago Tramrail Co., Chicago, Ill.
Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Ferdon Equipment Engineering Co., Hillside, N. J.
Louden Machinery Co., Fairfield, Iowa.
Philadelphia Tramrail Co., Philadelphia, Pa.
Reading Crane & Hoist Corp., Reading, Pa.
Richards-Wilcox Mfg. Co., Aurora, Ill.
Round Bridgeport Chain & Mfg. Co., Bridgeport, Conn.
Shepard Niles Crane & Hoist Corp., Montour Falls, N.Y.
Webb Co., Jervis B., Detroit, Mich.
Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.

MOTOR TRUCKS

See Trucks, Motor

MOTORS, ELECTRIC, DUCT, DAMPER, MODULATING OR PROPORTIONING

See Controls, Motor, Duct Damper, Modulating or Proportioning

MOTORS, ELECTRIC, DUCT, DAMPER, TWO POSITION

See Controls, Motor, Duct Damper, Two Position

MOTORS, ELECTRIC, FRACTIONAL H.P.

Baldor Electric Co., St. Louis, Mo.
Barber-Colman Co., Rockford, Ill.
Bodine Electric Co., Chicago, Ill.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Century Electric Co., St. Louis, Mo.
Crise Controls Div., Acro Mfg. Co., Columbus, Ohio.
Delco Appliance Div. General Motors Corp., Rochester, N. Y.
Delco Products Div. General Motors Corp., Dayton, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Eastern Air Devices, Inc., Brooklyn, N. Y.
Electric Motor Corp., Div., Howard Industries, Inc., Racine, Wis.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fairbanks, Morse & Co., Chicago, Ill.
Fasco Industries, Inc., Rochester, N. Y.
Franklin Electric Co., Inc., Bluffton, Ind.
General Die & Stamping Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Holtzer-Cabot Electric Motor Div. National Pneumatic Co., Inc., Boston, Mass.
HomEase Products Div., Inc., Bogue Electric Mfg. Co., Paterson, N.J.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Jack & Heintz, Inc., Cleveland, Ohio.
Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
Lamb Electric Co., Kent, Ohio.
Leland Electric Co., Div. American Machine & Foundry Co., Dayton, Ohio.
Lima Electric Motor Co., Lima, O.
Marathon Electric Mfg. Corp., Wausau, Wis.
Marco Industries, Inc., DePew, N. Y.
Master Electric Co., Dayton, Ohio.
Morey, Dan, Los Angeles, Calif.
Ohio Electric Mfg. Co., Cleveland, Ohio.
Packard Electric Div., General Motors, Corp., Warren, Ohio
Peerless Electric Co., Warren, Ohio.
Redmond Distributors, Inc., New York, N. Y.
Reuland Elec. Co., Alhambra, Calif.
Reynolds Electric Co., River Grove, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Rotor Corp., Dayton, Ohio.
Small Motors, Inc., Chicago, Ill.
Smith Corp., A. O., Milwaukee, Wis.
Speedway Mfg. Co., Cicero, Ill.
Sprague Products Co., North Adams, Mass.
Sutton Corp., O. A., Wichita, Kans.
Torq Electric Corp., Bedford, Ohio.
U.S. Electrical Motors, Inc., Los Angeles, Calif.
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whirlaway Motors, Tippecanoe City, Ohio.

MOTORS, ELECTRIC, 1 H.P. AND OVER

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Allis Co., Louis, Milwaukee, Wis.
Armor Electric Co., Erie, Pa.
Baldor Electric Co., St. Louis, Mo.
Bogue Electric Co., Paterson, N. J.
Brown-Brockmeyer Co., Inc., Dayton, Ohio.
Century Electric Co., St. Louis, Mo.
Crocker-Wheeler Div. Elliott Co., Ampere, N. J.
Delco Products Div., General Motors Corp., Dayton, Ohio.
Diehl Mfg. Co., Somerville, N. J.
Electric Machinery Mfg. Co., Minneapolis, Minn.
Electro Dynamic Div., General Dynamics Corp., Bayonne, N. J.
Emerson Electric Mfg. Co., St. Louis, Mo.
Fairbanks, Morse & Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Ideal Electric & Mfg. Co., Mansfield, Ohio.
Imperial Electric Co., Akron, Ohio.
Kingston-Conley Div., Hoover Co., North Plainfield, N. J.
Leland Electric Co., Div. American Machine & Foundry Co., Dayton, Ohio.
Marathon Electric Mfg. Corp., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.
Master Electric Co., Dayton, Ohio.
Peerless Electric Co., Warren, Ohio.
Philadelphia Gear Works, Inc., Philadelphia, Pa. (Geared)
Reliance Elec. & Engr. Co., Cleveland, Ohio.
Reuland Electric Co., Alhambra, Calif.
Robbins & Meyers, Inc., Springfield, Ohio.
Smith Corp., A. O., Milwaukee, Wis.
Star-Kimble Motor Div., Miehle Printing Press & Mfg. Co., Bloomfield, N.J.
Sterling Electric Motors, Inc., Los Angeles, Calif.
U. S. Electrical Motors, Inc., Los Angeles, Calif.
Valley Electric Co., St. Louis, Mo.
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.

MOULDINGS AND TRIM, ORNAMENTAL, CABINET AND CASING

Alden Mfg. Co., Painesville, Ohio.
Aluminum Co. of America, Pittsburgh, Pa.
Aluminum Goods Mfg. Co., Manitowoc, Wis. (Aluminum & stainless)
American Insulator Corp., New Freedom, Pa. (Plastic)
Brasco Mfg. Co., Harvey, Ill.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Detroit Moulding Div., L. A. Young Spring & Wire Corp., Detroit, Mich.
Empire Door Co., Inc., New York, N. Y.
Herron-Zimmers Moulding Co., Detroit, Mich.
Jamestown Metal Corp., Jamestown, N. Y.
Kawneer Co., Niles, Mich.
Maysteel Products, Inc., Milwaukee, Wis.
Miller & Doing, Brooklyn, N. Y.
Pyramid Mouldings, Inc., Chicago, Ill.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Werner Co., Inc., R. D., New York, N. Y.

MOULDINGS AND TRIM FOR SIDING AND SHINGLES

Allmetal Weatherstrip Co., Chicago, Ill. (Zinc)
Appleton Supply Co., Inc., Appleton, Wis. (Aluminum, zinc)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Inland Steel Products Co., Milwaukee, Wis. (Corners)
Klauer Mfg. Co., Dubuque, Iowa.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
New Delphos Mfg. Co., Delphos, Ohio. (Corners)
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y. (Bull nose corner bead)
Sioux Steel Co., Sioux Falls, S. Dak.
Werner Co., R. D., Inc., New York, N. Y.

NAILS, ALUMINUM

Aluminum Co. of America, Pittsburgh, Pa.
Dickson Weatherproof Nail Co., Evanston, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Hassall, Inc., John, Brooklyn, N. Y.
Independent Nail & Packing Co., Bridgewater, Mass.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Maze Co., W. H., Peru, Ill.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Potts-Farrington Co., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Reynolds Metals Co., Louisville, Ky.

NAILS, BRASS OR COPPER

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Copperweld Steel Co., Glassport, Pa.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Fanner Metals Products Co., Cleveland, O.
Hassall, Inc., John, Brooklyn, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Independent Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.

NAILS, HARDENED MASONRY

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hillwood Mfg. Co., Cleveland, Ohio.
Independent Nail & Packing Co., Bridgewater, Mass.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
Rawlplug Co., Inc., New York, N. Y. (Bolts)
Tremont Nail Co., Wareham, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Pa.

NAILS, ROOFING

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif. (Steel)
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Copper)
Continental Steel Corp., Kokomo, Ind. (Steel)
Copperweld Steel Co., Glassport, Pa. (Copper covered steel)
Deniston Co., Chicago, Ill. (Steel & aluminum)
Dickson Weatherproof Nail Co., Evanston, Ill. (Lead headed)
Division Lead Co., Summit, Ill. (Lead)
Hassall, Inc., John, Brooklyn, N. Y. (Copper)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Independent Nail & Packing Co., Bridgewater, Mass.
Inland Steel Products Co., Milwaukee, Wis. (Steel wire)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Maze Co., W. H., Peru, Ill.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Quaker State Metals Co., Lancaster, Pa. (Aluminum)
Republic Steel Corp., Cleveland, Ohio. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.

NAILS, SCREW, HARDENED

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Deniston Co., Chicago, Ill. (Pallet)
Dickson Weatherproof Nail Co., Evanston, Ill.
Hillwood Mfg. Co., Cleveland, Ohio. (Drive)
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Co., Chicago, Ill.
Maze Co., W. H., Peru, Ill.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.

NAILS, STAINLESS STEEL

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Independence Nail & Packing Co., Bridgewater, Mass.
Maze Co., W. H., Peru, Ill.
Star Stainless Screw Co., Paterson, N. J.
Tremont Nail Co., Wareham, Mass.

NAILS, ZINC COATED

American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia Steel Co., Sub. U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Dickson Weatherproof Nail Co., Evanston, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Independent Nail & Packing Co., Bridgewater, Mass.
Inland Steel Products Co., Milwaukee, Wis.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Maze Co., W. H., Peru, Ill.
New Delphos Mfg. Co., Delphos, Ohio.
Quaker State Metals Co., Lancaster, Pa.
Republic Steel Corp., Cleveland, Ohio.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tremont Nail Co., Wareham, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.

NIBBLERS

See Machines, Nibbling

NICKEL AND NICKEL ALLOY SHEETS

See Sheets, Metal, Special Metal

NIGHT AIR FANS

See Fans, Night Air Cooling

NOZZLES, OIL BURNER

Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis, Mo.
Boston Machine Works Co., Lynn, Mass. (Also nozzle kit)
Delavan Mfg. Co., West Des Moines, Iowa.
Hago Products, Irvington, N. J.
Harvey, Inc., Sid, Valley Stream, N. Y.
Hasko Utilities Co., New York, N. Y.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Steinen Mfg. Co., Wm., Newark, N. J.

NOZZLES, SPRAY, WATER

American Cooling Tower Co., Kansas City, Mo.
Balloffet Dies & Nozzle Co., Inc., Guttenberg, N. J.
Benjamin Air Rifle Co., St. Louis, Mo.
Binks Mfg. Co., Chicago, Ill.
Blower Application Co., Milwaukee, Wis.
Buffalo Forge Co., Buffalo, N. Y.
Chain Belt Co., Milwaukee, Wis.
Clarage Fan Co., Kalamazoo, Mich.
Delavan Mfg. Co., West Des Moines, Iowa.
Handelan Air Washer Co., Minneapolis, Minn.
Harry Cooling Towers, Inc., New York, N. Y.
Link-Belt Co., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Monarch Mfg. Works, Inc., Philadelphia, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
Plummer Spray Equipment Co., Napoleon, Ohio.
Rega Mfg. Co., Rochester, N. Y.
Ross Sprinkler Co., Pasadena, Calif.
Spray Engineering Co., Somerville, Mass.
Spraying Systems Co., Bellwood, Ill.
Steinen Mfg. Co., Wm., Newark, N. J.
Supreme Electric Products Corp., Rochester, N. Y.
U. S. Gutta Percha Paint Co., Providence, R. I.
Water Cooling Corp., New York, N. Y.
Water Cooling Equipment Corp., St. Louis, Mo.
Yarnall-Waring Co., Philadelphia, Pa.

ODOR ADSORBERS

See Adsorbers, Odor

OIL BURNER CONTROLS

See Controls; Control Systems

OIL BURNER PARTS

Combustion Heads, Electrodes, Air Tubes, Etc.

A-P Controls Corp., Milwaukee, Wis. (Oil lifters, flow control valves)
Airflame, Waukegan, Ill. (Combustion head)
Auburn Spark Plug Co., Inc., Auburn, N. Y. (Electrodes)
Burnrite Valve Mfg. Corp., Mt. Vernon, N. Y.
Crown Eng. Corp., Keyport, N. J. (Electrodes)
Dielectric Products Corp., Inc., Jersey City, N. J. (Electrodes)
Electrical Components Co., Newark, N. J. (Electrodes)
Equi-Dyne, Inc., Chicago, Ill.
Fisher Governor Co., Marshalltown, Ia. (Liquid level controls)
Gas & Oil Industry Laboratories, Inc., Irvington, N. J. (Valves)
Guardian Products Corp., Michigan City, Ind.
Harvey, Inc., Sid, Valley Stream, N. Y. (Electrodes, air tubes)
Hayes Mfg. Co., Erie, Pa. (Valve fittings)
Heetrliter Co., Newberg, Ore.
Hold-Tite Valve Mfg. Co., New York, N. Y. (Line check valves)
HomEase Products Div., Inc., Bogue Electric Mfg. Co., Paterson, N. J. (Electrodes)
Hydrovalve Co., Brooklyn, N. Y. (Electrodes)
Isolantite Products Co., Seattle, Wash. (Electrodes)
Lord Mfg. Co., Erie, Pa.
Lovejoy Flexible Coupling Co., Chicago, Ill. (Flexible shaft couplings)
Modern Die & Machine Co., Boston, Mass. (Combustion head)
Morse-Smith-Morse Co., The, Watertown, Mass. (Valves)
Mueller Co., Decatur, Ill. (Valves)

National Fuel Conservation Co., Inc., White Plains, N. Y. (Combustion head)
Nu-Way Corp., The, Rock Island, Ill. (Nozzle and electrode assembly)
Oilgas Generating Burners, Inc., New Castle, Pa. (Combustion head)
Quiet Automatic Burner Corp., Newark, N. J. (Combustion head)
Richfield Mfg. Corp., New Rochelle, N. Y. (Combustion head)
Shell Oil Co., New York, N. Y. (Combustion head)
Siemon Mfg. Co., Kansas City, Mo.
Webster Electric Co., Racine, Wis. (Nozzle valve)

OIL BURNERS

See Burners, Conversion, Oil

ORNAMENTS, SHEET METAL

See Mouldings and Trim, Ornamental

PACKAGED SYSTEMS

See Systems, Heating, Small Pipe

PAINT, ROOFING

American-Marietta Co., Chicago, Ill.
Baer Bros., New York, N. Y.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y. (Pitch base)
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Carter Paint Co., Liberty, Ind.
Champion Bronze Powder & Paint Co., Chicago, Ill.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Clinton Metallic Paint Co., Clinton, N. Y. (Red metallic)
Continental Products Co., Euclid, Ohio.
Debevoise Co., Brooklyn, N. Y.
Devoe & Raynolds Co., Inc., New York, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Flintkote Co., New York, N.Y.
Hetzel Roofing Products Co., Newark, N. J.
Horn Co., Inc., A. C., Long Island City, N. Y.
Illinois Bronze Powder Co., Inc., Chicago, Ill.
Inter-Coastal Paint Co., East St. Louis, Ill.
Iowa Paint Mfg. Co., Inc., Des Moines, Iowa. (Asphalt)
Koppers Co., Inc., Pittsburgh, Pa.
Lastik Products Co., Inc., Pittsburgh, Pa. (Asphalt & fiber)
Lehon Co., Chicago, Ill.
Lexsuco, Inc., Cleveland, Ohio.
Lucas & Co., Inc., John, Philadelphia, Pa.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Midland Paint & Varnish Co., Cleveland, Ohio.
Mortell Co., J. W., Kankakee, Ill.
National Mfg. Corp., Tonawanda, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
North American Mogul Products Co., Cleveland, Ohio.
Ohmlac Paint & Refining Co., Chicago, Ill. (Asphalt)
Pabco Products, Inc, San Francisco, Calif.
Pecora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Potts-Farrington Co., Philadelphia, Pa.
Presstite Engineering Co., St. Louis, Mo.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Reynolds Metals Co., Louisville, Ky.
Ruberoid Co., New York, N. Y.
Rutland Fire Clay Co., Rutland, Vt. (Asphalt)
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Sherwin-Williams Co., Cleveland, Ohio.
Sipe & Co., James B., Pittsburgh, Pa.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Thompson & Co., Oakmont, Pa.
Toch Bros., Inc., Staten Island, N. Y.
Tropical Paint & Oil Co., Cleveland, Ohio.
Truscon Laboratories, Detroit, Mich.
Whitlam Mfg. Co., J. C., Wadsworth, O.

PAINT, SHEET METAL

Aluminum, Finish Coat, Prime Coat, etc.

American-Marietta Co., Chicago, Ill. (Aluminum, prime & finish coat)
Atlas Powder Co., North Chicago, Ill.
Babbitt Chemical Specialties Co., New Bedford, Mass. (Aluminum, finish coat)
Baer Bros., New York, N. Y. (Aluminum)
Barreled Sunlight Paint Co., Providence, R.I. (Aluminum, finish coat)
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Blue Ridge Talc Co., Inc., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass. (Aluminum, metal protecting)
Calbar Paint & Varnish Co., Philadelphia, Pa. (Aluminum, finish coat)
Carboline Co., St. Louis, Mo. (Aluminum, finish coat & prime coat)
Carey Co., Philip, Cincinnati, Ohio. (Aluminum)
Carter Paint Co., Liberty, Ind.
Champion Bronze Powder & Paint Co., Chicago, Ill. (Self-spraying bombs, all colors)
Chase Products, Inc., Maywood, Ill.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Continental Products Co., Euclid, Ohio. (Aluminum, finish coat)
Coopers Creek Chemical Corp., West Conshohocken, Pa. (Aluminum, finish coat)
Cordo Chemical Corp., Norwalk, Conn. (Acid and alkali resistant coatings)
Corrosite Corp., New York, N. Y. (Plastic)
Debevoise Co., Brooklyn, N. Y. (Prime coat & finish coat)
Devoe & Raynolds Co., Inc., New York, N. Y. (Aluminum, finish coat)
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Aluminum, prime coat & finish coat)
Flintkote Co., New York, N. Y. (Aluminum)
Flood Co., Hudson, Ohio.
Glidden Co., Cleveland, Ohio. (Aluminum, finish coat)
Hague & Co., Alfred, Brooklyn, N. Y. (Aluminum, finish coat)
Hetzel Roofing Products Co., Newark, N. J. (Aluminum, finish coat)
Hilo Varnish Corp., Everett, Mass. (Zinc chromate)
Horn Co., Inc., A. C., Long Island City, N. Y. (Aluminum, finish coat)
Illinois Bronze Powder Co., Inc., Chicago, Ill. (Aluminum)
Industrial Metal Protectives, Dayton, O.
Inter-Coastal Paint Co., East St. Louis, Ill. (Prime coat, finish coat & sound deadening)
Iowa Paint Mfg. Co., Inc., Des Moines, Ia.
Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., Irvington, N. J. (Finish coat)
Koppers Co., Inc., Pittsburgh, Pa. (Aluminum, finish coat)
Lastik Products Co., Inc., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
Lehon Co., Chicago, Ill. (Aluminum)
Lucas & Co., Inc., John, Philadelphia, Pa.
Maas & Waldstein Co., Newark, N. J.
Markal Co., Chicago, Ill.
Midland Paint & Varnish Co., Cleveland, Ohio. (Aluminum, finish coat)
Morris Paint & Varnish Co., Omaha, Nebr.
National Engineering Products, Inc., Washington, D. C.
National Lead Co., New York, N. Y. (Prime, finish coat)
National Mfg. Corp., Tonawanda, N. Y. (Aluminum)
Nebel Mfg. Co., Cleveland, Ohio. (Aluminum, finish coat)
North American Mogul Products Co., Cleveland, Ohio. (Finish coat).
O'Brien Corp., South Bend, Ind. (Aluminum, finish coat & prime coat)
Ohmlac Paint & Refining Co., Chicago, Ill. (Finish coat)
Pabco Products Inc., San Francisco, Calif. (Aluminum, prime coat & finish coat)
Patterson-Sargent Co., Cleveland, Ohio.
Pecora Paint Co., Philadelphia, Pa. (Aluminum, finish coat).
Pittsburgh Plate Glass Co., Pittsburgh, Pa. (Aluminum, finish coat)
Presstite Engineering Co., St. Louis, Mo. (Aluminum)
Quigley Co., Inc., New York, N. Y. (Aluminum, finish coat)
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Rust-Oleum Corp., Evanston, Ill. (Aluminum, prime coat, finish coat & rust preventive coatings)
Rutland Fire Clay Co., Rutland, Vt. (Prime coat)
S. O. S. Products Co., Inc., Brooklyn, N. Y. (Aluminum)
Sherwin-Williams Co., Cleveland, Ohio. (Aluminum)
Sipe & Co., James B., Pittsburgh, Pa. (Aluminum, prime coat & finish coat)
Slip-On, Inc., New York, N. Y.
Sonneborn Sons, Inc., L., New York, N. Y. (Aluminum, finish coat)
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Speco, Inc., Cleveland, Ohio (Aluminum)
Tamms Industries, Inc., Chicago, Ill. (Finish coat)
Thompson & Co., Oakmont, Pa. (Aluminum, finish coat)
Toch Brothers, Inc., Staten Island, N. Y. (Finish coat)

Tropical Paint & Oil Co., Cleveland, Ohio. (Aluminum, finish coat)
Truscon Laboratories, Detroit, Mich. (Aluminum, prime coat & finish coat)
Turco Products, Inc., Los Angeles, Calif.
United Chromium, Inc., New York, N. Y. (Aluminum, prime coat, finish coat)
United Gilsonite Laboratories, Scranton, Pa.
United States Stoneware Co., New York, N. Y. (Aluminum, finish coat)
Whitlam Mfg. Co., J. C., Wadsworth, O. (Aluminum, prime coat, finish coat)
Wilbur & Williams Co., Brighton, Mass. (Aluminum, prime coat, finish coat)

PAINT SPRAY GUNS

See Guns, Spray, Paint

PANELS, CURTAIN WALL, PREFABRICATED

Celotex Corp., Chicago, Ill.
Cemenstone Corp., Neville Island, Pittsburgh, Pa.
General Bronze Corp., Garden City, L.I., N.Y.
Mahon Co., R. C., Detroit, Mich.
Steelcraft Mfg. Co., Rossmoyne, O.

PANELS, PLASTIC, TRANSLUCENT MATERIAL

Alsynite Co. of America, San Diego, Calif.
Chemold Co., Santa Monica, Calif.
Libbey-Owens Ford Glass Co., Toledo, O.
Soule Steel Co., San Francisco, Calif.

PAPER, ASBESTOS

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Carey Mfg. Co., Philip, Cincinnati, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Johns-Manville, New York, N. Y.
Keasbey & Mattison Co., Ambler, Pa.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Ruberoid Co., New York, N. Y.
Sall Mountain Co., Hamilton, Ohio.
Standard Asbestos Mfg. Co., Chicago, Ill.
Wilson, Inc., Grant, Chicago, Ill.

PASTE, ASBESTOS PAPER

Acme Asbestos Covering & Flooring Co., Chicago, Ill.
Arabol Mfg. Co., New York, N. Y. (Insulation adhesive)
Clark Stek-O Corp., Rochester, N. Y.
Norristown Magnesia & Asbestos Co., Norristown, Pa.
Rutland Fire Clay Co., Rutland, Vt.
Sall Mountain Co., Hamilton, Ohio.
Standard Asbestos Mfg. Co., Chicago, Ill.
Western Mineral Products Co., Minneapolis, Minn.
Wilson, Inc., Grant, Chicago, Ill.

PATTERNS AND BLUE PRINTS

Elbows, Skylights, Fittings, Etc.

Gray, G. L., New Haven, Conn.

PERFORATED METAL

See Metals, Perforated, Sheet and Plate

PERIMETER REGISTERS

See Diffusers, Air

PILLOW BLOCKS

See Bearings, Pillow Block

PILOT LIGHTS

See Controls, Pilots, Gas Burner

PIPE AND FITTINGS, CONDUCTOR

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
Alabama Metal Lath Co., Birmingham, Ala. (Steel & copper)
American Metal Products, Los Angeles, Calif. (Alum.)
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Carlon Products, Cleveland, Ohio. (Plastic)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Dieckmann Co., Ferdinand, Cincinnati, O. (Aluminum, copper)
Downs-Smith Brass & Copper Co., New York, N. Y. (Copper)
Enderle, Inc., Ltd., Frank X., Los Angeles, Calif.
Globe Iron Roofing & Corrugating Co. Newport, Ky.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Copper & galv.)
Johns-Manville, New York, N. Y.
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis. (Galv. steel)
Lamb & Ritchie Co., Cambridge, Mass. (Galvanized & copper)
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif. (Galv.)
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Steel Corp., Newport, Ky.
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Obdyke, Inc., B. P., Philadelphia, Pa. (Copper, galv. & stainless steel)
Overly Mfg. Co., Greensburg, Pa.
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa. (Alum., copper, galv.)
Quaker State Metals Co., Lancaster, Pa. (Aluminum)
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, inc., Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn. (Steel, copper)
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schecter Bros. Co., Philadelphia, Pa. (Galv. steel & copper)
Schoedinger, F. O., Columbus, Ohio. (Galv. stainless steel, & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Aluminum, copper, galvanized steel & zinc)
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Standard Furnace Supply Co., Ltd., Omaha, Nebr. (Galvanized)
Thor Metal Products Co., Inc., Syracuse, N.Y. (Galv. & copper)
Tiffin Art Metal Co., Tiffin, Ohio. (Galv., copper, stainless steel, aluminum)
Wallace Co., William, Meltalbestos Div., Belmont, Calif. (Galvanized and copper)
Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)
York Corrugating Co., York, Pa. (Copper & galv.)

PIPE AND FITTINGS, GAS VENT AND FLUE

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Agile Corp., Bedford, Ohio. (Plastic)
American Metal Products, Los Angeles, Calif.
Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain enamel)
Baum Heating, Inc., J. H., Youngstown, Ohio. (Galv.)
Buckeye Furnace Pipe Co., Columbus, Ohio.
Byers Co., A. M., Pittsburgh, Pa. (Wrought iron)
Char-Gale Mfg. Co., Minneapolis, Minn. (Blue and Galvanized)
Condensation Engineering Corp., Chicago, Ill. (Vitreous Enamel)
Enderle, Inc., Frank X., Los Angeles, Calif. (Galv & asbestos)
Excelsior Steel Furnace Co., Chicago, Ill. (Galvanized)
Excelsior Stove & Mfg. Co., Quincy, Ill. (Blue & galv.)
Henry Furnace Co., Medina, Ohio.
Johns-Manville, New York, N. Y. (Asbestos & cement)
Juniper Elbow Co., Inc., Middle Village, L.I., N.Y.
Laclede Steel Co., St. Louis, Mo. (Butt Weld—wrought steel)
Majestic Co., Inc., Huntington, Ind. (Aluminum)
Metal Fabricators, Inc., Charlotte, N. C. (Galvanized)
Peacard Co., M. A., Boston, Mass.
Penn Supply & Metal Corp., Philadelphia, Pa. (Galv., alum.)
St. Clair Metal Products Co., Cleveland, Ohio. (Black, galv., chrome)
Tri-State Heating Supply, Inc., Ft. Wayne, Ind. (Galv.)
Van-Packer Corp., Chicago, Ill. (Lightweight masonry)
Wilder Products Co., Springfield, Ohio.
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Aluminum)
Williamson Heater Co., Cincinnati, Ohio. (Galv.)

PIPE AND FITTINGS, SMOKE

Draw-Bands, Clean-Outs, Collars, Tees, Etc.

Acer & Whedon, Inc., Medina, N. Y.
Acme Furnace Fitting Co., Chicago, Ill.
Acme Mfg. Co., Philadelphia, Pa.
Adelta Mfg. Co., Inc., Philadelphia, Pa. (Galv. & black)
Aireflo Furnace Pipe Co., Brighton, Mich.
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Metal Products, Los Angeles, Calif.
Armstrong Furnace Co., Columbus, Ohio.

Baum Heating, Inc., J. H., Youngstown, Ohio.
Berger Furnace Mfg., Co., Pittsburgh, Pa.
Bergstrom Mfg. Corp., Neenah, Wis.
Bieler & Son, L., Long Island City, N. Y.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Buckeye Furnace Pipe Co., Columbus, Ohio.
Champion Furnace Pipe Co., Peoria, Ill.
Char-Gale Mfg. Co., Minneapolis, Minn.
Chicago Furnace Supply Co., Chicago, Ill.
Chicago Heights Furnace Supply Co., Chicago Heights, Ill.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Condensation Engineering Corp., Chicago, Ill.
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Corbman Bros., Inc., Philadelphia, Pa.
Detroit Safety Furnace Pipe Co., Detroit, Mich.
Eisbach, Albert N., Dubuque, Iowa.
Excelsior Steel Furnace Co., Chicago, Ill.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Famous Furnace Co., Cleveland, O.
Gary Steel Products Co., Gary, Ind.
Grand Island Furnace & Supply Co., Grand Island, Nebr.
Gray Metal Products, Inc., Rochester, N. Y.
Green Colonial Furnace Co., Des Moines, Iowa.
Henry Furnace Co., Medina, Ohio.
Home Furnace Co., Holland, Mich.
Howes-Woods Co., Cambridge, Mass.
Hugert Mfg Co., Medina, Ohio.
Inland Steel Products Co., Milwaukee, Wis.
International Heater Co., Utica, N. Y.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., Pittsburgh, Pa.
Juniper Elbow Co., Inc., Middle Village, L.I., N.Y.
Keith Furnace Co., Des Moines, Iowa.
Kirk & Blum Mfg. Co., Cincinnati, O.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lennox Furnace Co., Marshalltown, Iowa.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif. (Galv.)
Lyman Co., H. B., Southampton, Hampshire Co., Mass.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Made-Rite Co., Inc., Newport, Ky.
Majestic Co., Inc., Huntington, Ind.
Maple City Furnace Co., Monmouth, Ill.
Marshall Furnace Co., Marshall, Mich.
Metal Fabricators, Inc., Charlotte, N. C.
Metalmen, Inc., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Montag Stove & Furnace Works, Portland, Ore.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Northwest Metal Products, Inc., Seattle, Wash. (Black & galv.)
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., Evansville, Ind.
Olsen Mfg. Co., C. A., Elyria, Ohio.
Peacard Co., M. A., Boston, Mass.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perfection Furnace Pipe Co., Toledo, Ohio.
Portland Stove Foundry Co., Portland, Maine.
Premier Furnace Co., Dowagiac, Mich.
Quality Heating Supply Co., Cincinnati, O.
Ralph Mfg. Co., Inc., Wadsworth, O.
Reeves Steel & Mfg. Co., Dover, Ohio.
Riggin Metal Products, Kankakee, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Round Oak Co., Inc., Dowagiac, Mich.
St. Clair Metal Products Co., Cleveland, Ohio.
Schecter Bros. Co., Philadelphia, Pa.
Schoedinger, F. O., Columbus, Ohio.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sheet Metal Specialty Div., Follansbee Steel Corp., Follansbee, W. Va.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Stratton & Terstegge Co., Louisville, Ky.
Superior Products Co., Omaha, Nebr.
Thor Metal Products, Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Tiffin Art Metal Co., Tiffin, O.
Tri-State Heating Supply, Inc., Ft. Wayne, Ind.
United States Register Co., Battle Creek, Mich.
Waverly Heating Supply Co., Boston, Mass.
Wheeling Corrugating Co., Wheeling, W. Va.
Wilder Products Co., Springfield, Ohio.
Williamson Heater Co., Cincinnati, Ohio.
Youngstown Furnace Co., Youngstown, Ohio.

PIPE LOCK FORMERS

See Machines, Lock Forming

PITTSBURGH LOCK FORMING MACHINES

See Machines, Pittsburgh Lock Forming

PLASTIC TRANSLUCENT PANELS

See Panels, Plastic Translucent Material

PLASTIC TUBING

See Tubing, Plastic

PLATES, ALLOY

Allegheny Ludlum Steel Corp., Pittsburgh, Pa (Stainless steel)
Aluminum Co. of America, Pittsburgh, Pa.
American Brass Co., New York, N. Y. (Copper)
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
Belmont Smelting & Refining Wks., Inc., Brooklyn, N. Y. (Zinc, lead)
Bethlehem Steel Co., Bethlehem, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper and its alloys)
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif. (Steel)
Division Lead Co., Summit, Ill. (Lead, tin, zinc)
Dow Chemical Co., Midland, Mich. (Magnesium)
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
Inland Steel Co., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Jessop Steel Co., Washington, Pa. (Carbon, high speed)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Pa. (Nickel, chromium, copper, manganese, molybdenum, alloys)
Monarch Alloys, Ravenna, Ohio.
Republic Steel Corp., Cleveland, O.
Revere Copper & Brass Inc., New York, N. Y. (Copper & copper base)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
United States Steel Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

PLATES, STEEL

Armco Steel Corp., Middletown, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Granite City Steel Co., Granite City, Ill.
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill. (Stainless clad)
Inland Steel Co., Chicago, Ill.
International Steel Co., Evansville, Ind.
Jessop Steel Co., Washington, Pa.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Lukens Steel Co., Coatesville, Pa.
Republic Steel Corp., Cleveland, O.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Wood Steel Co., Alan, Conshohocken, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

PLATES, WROUGHT IRON

Byers Co., A. M., Pittsburgh, Pa.

POLISHERS

See Buffers, Grinders, Polishers and Sanders

POWER SHEARS

See Machines, Sheet Metal, Shears

PRECIPITATORS, ELECTROSTATIC

See Filters, Air, Electrostatic

PREFABRICATED DUCTS

See Ducts and Duct Fittings, Prefabricated

PRESSES

See Machines, Sheet Metal, Presses

PROPELLER FANS

See Fans, Propeller Type

PROTECTIVE COATING

See Waterproofing, Coating Materials

PSYCHROMETERS, SLING AND HAND ASPIRATED

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
G. M. Mfg. Co., New York, N. Y.
General Scientific Equipment Co, Philadelphia, Pa.
H-B Instrument Co., Philadelphia, Pa.
Hill & Co., E. Vernon, Lake Geneva, Wis.
Johnson Service Co., Milwaukee, Wis.
Mine Safety Appliance Co., Pittsburgh, Pa.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Norwood, Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

PULLEYS, FAN AND MOTOR

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Pulley Co., Philadelphia, Pa.
Browning Mfg. Co., Inc., Maysville, Ky.
Chicago Die Casting Co., Chicago, Ill.
Congress Drives, Div. Tann Corp., Detroit, Mich.
Dayton Rubber Co., Dayton, Ohio.
Dick Co., Inc., R. & J., Passaic, N. J.
Dodge Mfg. Corp., Mishawaka, Ind.
Equi-Dyne, Inc., Chicago, Ill.
Gates Rubber Co., Denver, Colo.
Golden's Foundry & Machine Co., Columbus, Ga.
Jones Foundry & Machine Co., W. A., Chicago, Ill.
Lau Blower Co., Dayton, Ohio.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Maurey Mfg. Corp., Chicago, Ill.
Mitchell Co., Inc., John E., Dallas, Texas. (V-groove)
Pyott Foundry & Machinery Co., Chicago, Ill.
Scientiae Tool Co., Dayton, Ohio.
Spun Steel Div., Automatic Steel Products, Inc., Canton, Ohio.
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
W. C. Products, Inc., Santa Monica, Calif.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULLEYS, FURNACE CHAIN

Hart & Cooley Mfg. Co., Holland, Mich.
United States Register Co., Battle Creek, Mich.

PUMPS, FUEL, OIL BURNER

A-P Controls Corp., Milwaukee, Wis.
Barclay, Inc., Robt., Chicago, Ill.
Delo Screw Products Co., Delaware, O.
Kraissl Co., Inc., Hackensack, N. J.
Polo Pump Co., Polo, Ill.
Roper Corp., Geo. D., Rockford, Ill.
Sundstrand Machine Tool Co., Rockford, Ill.
Tuthill Pump Co., Chicago, Ill.
Union Steam Pump Co., Battle Creek, Mich.
Viking Pump Co., Cedar Falls, Iowa.
Webster Electric Co., Racine, Wis.

PUMPS, RECIRCULATING, EVAPORATIVE COOLERS

Beckett & Co., Thomas, Dallas, Texas.
Buffalo Forge Co., Buffalo, N. Y.
Jabsco Pump Co., Burbank, Calif.
Kraissl Co., Inc., Hackensack, N. J.
Little Giant Vaporizer Co., Oklahoma City, Okla.
Midwest Mfg. Co., Lawrence, Kans.
Morey, Dan, Los Angeles, Calif.
Myers & Bro. Co., F. E., Ashland, Ohio.
National Engineering & Mfg. Co., Sedalia, Mo.
Robbins & Myers, Inc., Springfield, Ohio.
Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
Union Steam Pump Co., Battle Creek, Mich.
Yeomans Bros. Co., Melrose Park, Ill.

PUNCHES AND SHEARS COMBINED, LEVER OPERATED

Berkroy Products Co., Burbank, Calif.
Buffalo Forge Co., Buffalo, N. Y.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Heartley Machine & Tool Co., Toledo, Ohio.
Heinrich Tools, Inc., Racine, Wis.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Niagara Machine & Tool Works, Buffalo, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Inc., San Leandro, Calif.
Weiss & Co., H., New York, N. Y.

PUNCHES, BENCH

Berkroy Products Co., Burbank, Calif.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Diamond Machine Tool Co., Los Angeles, Calif.
Heartley Machine & Tool Co., Toledo, Ohio.
Heinrich Tools, Inc., Racine, Wis.
Hendley & Whittemore Co., Beloit, Wis.
Kidder Mfg. Co., J. F., Burlington, Vt.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Inc., San Leandro, Calif.
Thor Tool & Die Co., San Leandro, Calif. (Clip punches & dies)
Weiss & Co., H., New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa. (Turret)

PUNCHES, COMBINATION HAND AND BENCH

Champion Blower & Forge Co., Lancaster, Pa.
Heartley Machine & Tool Co., Toledo, Ohio.
Hendley & Whittemore Co., Beloit, Wis.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Rotex Punch Co., Inc., San Leandro, Calif.
Weiss & Co., H., New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa.

PUNCHES, HAND

Berkroy Products Co., Burbank, Calif.
Buffalo Forge Co., Buffalo, N. Y.
Champion Blower & Forge Co., Lancaster, Pa.
Cleveland Punch & Shear Works Co., Cleveland, Ohio.
Crescent Tool Co., Jamestown, N. Y.
Damascus Steel Products Corp., Rockford, Ill.
Excelsior Tool & Machine Co., East St. Louis, Ill.
Hendley & Whittemore Co., Beloit, Wis.
Ingels Elbow Machine Corp., Chicago, Ill.
Johnson, Inc., William, Newark, N. J.
Kidder Mfg. Co., J. F., Burlington, Vt.
Niagara Machine & Tool Works, Buffalo, N. Y.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Co., Philadelphia, Pa.
Reiner & Campbell Co., Inc., Newark, N. J.
Rotex Punch Co., Inc., San Leandro, Calif.
Snap-On Tools Corp., Kenosha, Wis.
Stanley Tools, New Britain, Conn.
Weiss & Co., H., New York, N. Y.
Whitney Mfg. Co., W. A., Rockford, Ill.
Whitney Metal Tool Co., Rockford, Ill.
Wiedemann Machine Co., Philadelphia, Pa. (Turret)

QUADRANTS, DAMPER

See Regulators, Duct Damper Sets; Hardware, Duct Fitting

RECORDERS, HUMIDITY, PORTABLE

Bristol Co., Waterbury, Conn.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.

Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

RECORDERS, TEMPERATURE, PORTABLE

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bailey Meter Co., Cleveland, Ohio.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Dickson Co., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Palmer Thermometers, Inc., Cincinnati, Ohio.
Preferred Utilities Mfg. Corp., New York, N. Y.
Taylor Instrument Companies, Rochester, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.

RECOVERERS, HEAT

Air Conditioning Engineering Co., Cambridge, Mass.
Autogas Co., Chicago, Ill.
Cary Mfg. Co., Waupaca, Wis.
Elmwood Mfg. Co., Detroit, Mich.
Gerhardt, W. F., Richmond, Va. (oil or gas)
Rayfield Co., C. L., Chicago, Ill.
Therm-O-Wheel, Inc., Far Rockaway, N. Y.

REFRACTORIES

Amerform Corp., Philadelphia, Pa.
Armstrong Cork Co., Lancaster, Pa. (Insulating)
Babcock & Wilcox Co., Refractories Div., New York, N. Y.
Bird-Archer, Philadelphia, Pa.
Bothfield Refractories Co., Philadelphia, Pa.
Chicago Fire Brick Co., Chicago, Ill.
Durex Refractories Co., Chicago, Ill.
Fireline Stove & Furnace Lining Co., Chicago, Ill. (For hearths and firepot linings)
Green Fire Brick Co., A. P., Mexico, Mo. (All types fire clay)
Insulating Castable Corp., River Rouge, Mich.
Iron-Hide Sales Co., Matawan, N.J.
Johns-Manville, New York, N. Y.
Kolb Refractories Co., Philadelphia, Pa.
Laclede-Christy Co., St. Louis, Mo. (Fire clay)
Monogram Products Co., Inc., Philadelphia, Pa.
Pyrolite Products Co., Cleveland, Ohio.
Quigley Co., Inc., New York, N. Y.
Ramtite Co., Div. S. Obermayer Co., Chicago, Ill.
Rehm, R., St. Albans, N. Y. (Radiant)
Refractory & Insulation Corp., New York, N. Y.
Rex Roto Corp., Detroit, Mich.
Robinson Insulation Co., Great Falls, Mont. (Vermiculite)
Rutland Fire Clay Co., Rutland, Vt. (Retort Cement)
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Saureisen Cements Co., Pittsburgh, Pa.
Standard Fuel Engineering Co., Detroit, Mich.
U. S. Stoneware Co., New York, N. Y.
Walsh Refractories Corp., St. Louis, Mo.

REFRIGERANTS

Ansul Chemical Co., Refrigeration Div., Marinette, Wis. (Methyl chloride, sulphur dioxide)
Dow Chemical Co., The, Midland, Mich.
du Pont de Nemours & Co., Inc., E. I. Kinetic Chemicals Div., Wilmington, Del. ("Freon" fluorinated hydro carbon refrigerants)
Eston Chemicals Div., American Potash & Chemicals Corp., Los Angeles, Calif.
General Chemical Div., Allied Chemical & Dye Corp., New York, N. Y.
Solvay Sales Div., Allied Chemical & Dye Corp., New York, N. Y.

REFRIGERATING UNITS

See Condensing Units, Refrigerating

REGISTER SEALS

See Seals for Registers

REGISTER SHIELDS

See Shields, Warm Air Register

REGISTERS, HEATING, VENTILATING AND AIR CONDITIONING

A & A Register Co., Cleveland, Ohio.
A-J Mfg. Co., Kansas City, Mo.
Air Conditioning Products Co., Detroit, Mich.
Air Control Products, Inc., Coopersville, Mich.
American Warming & Ventilating Co., Toledo, Ohio.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Best Register Co., Milwaukee, Wis.
Brandes Co., Madison, Wis. (Continuous slotted baseboard)
Carnes Co., W. R., Verona, Wis.
Char-Gale Mfg. Co., Minneapolis, Minn.
Controlair Mfg. Co., Los Angeles, Calif.
Diamond Mfg. Co., Wyoming, Pa.
Dole Valve Co., Chicago, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gerwin Industries, Thermo-Base Div., Michigan City, Ind.
Harrington & King Perforating Co., Chicago, Ill.
Harrison Sheet Steel Co., Chicago, Ill.
Hart & Cooley Mfg. Co., Holland, Mich.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Hendrick Mfg. Co., Carbondale, Pa.
Independent Register Co., Cleveland, Ohio.
Krueger Air Conditioning Co., Tucson, Ariz.
Lima Register Co., Lima, Ohio.
Louvra Corp., Union, N.J.
Metal Carrier Corp., Grand Rapids, Mich.
Midco Register Corp., St. Paul, Minn.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn
Mueller Furnace Co., L. J., Milwaukee, Wis.
Patco Mfg. Co., Philadelphia, Pa.
Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Roberts Co., S. R., Marshall, Mich.
Rock Island Register Co., Rock Island, Ill.
Smith Co., J. B., Philadelphia, Pa.
Standard Stamping & Perforating Co., Chicago, Ill.
Stewart Mfg. Co., Cedar Grove, N. J.
Titus, Inc., Waterloo, Iowa.
Titus Mfg., Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.
Vectaire Mfg. Co., Melrose, Mass.
Waterloo Register Co., Inc., Waterloo, Ia.
Wilde Register & Grille Co., Detroit, Mich.
Young Regulator Co., Cleveland, Ohio.

REGULATORS, DUCT DAMPER SETS

Acme Mfg. Co., Philadelphia, Pa.
Adams Co., Dubuque, Iowa.
Air Control Products, Inc., Coopersville, Mich.
Barber-Colman Co., Rockford, Ill.
Cole-Sewell Engineering Co., St. Paul, Minn. (Damper locks)
Connecticut State Furnace Co., Inc., Bridgeport, Conn.
Controlair Mfg. Co., Los Angeles, Calif.
Duro-Dyne Corp., Hempstead, L.I., N. Y.
Gerett Corp., M. A., Milwaukee, Wis.
Hart & Cooley Mfg. Co., Holland, Mich.
Harvey, Inc., Sid, Valley Stream, N. Y.
Kerentoff, G. L., Cincinnati, Ohio.
Malm Mfg. Co., St. Paul, Minn.
Martens & Stormoen, West Quincy, Mass.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
Perfex Corp., Milwaukee, Wis.
Severson Mfg. & Supply Co., Milwaukee, Wis
United States Register Co., Battle Creek, Mich.
Wa-Trol, Houston, Tex.
Young Regulator Co., Cleveland, Ohio.

REGULATORS, FURNACE DRAFT, MECHANICAL

Atlas Valve Co., Newark, N. J.
Barber-Colman Co., Rockford, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo.
Hart & Cooley Mfg. Co., Holland, Mich.
Hays Corp., Michigan City, Ind.
Little Janitor Furnace Clock Co., New York, N. Y.

National Fuel Conservation Co., Inc., White Plains, N. Y.
Quickdraft Co., Div. Hall's Safe Co., Inc., Canton, O.

RELAYS, ELECTRICAL

See Controls, Relay

REMOVER, SOOT

Ampion Corp., Long Island City, N. Y.
Coughlan Co., G. N., West Orange, N. J.
General Filters, Inc., Novi, Mich.
Harvey, Inc., Sid, Valley Stream, N. Y.
Healy-Ruff Co., St Paul, Minn.
Hercules Chemical Co., Inc., New York, N. Y.
Magnus Chemical Co., Garwood, N. J.
Marine Electrolysis Eliminator Co., Seattle, Wash.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Miller Products Co., Lansing, Mich.
North American Mogul Products Co., Cleveland, Ohio.
Red Wing Oil Burner Co., Inc., Medford, Mass.
S.O.S. Products Co., Inc., Brooklyn, N. Y.
Tamms Industries Inc., Chicago, Ill.

REPAIRS, STOVE AND FURNACE

Adams Co., Dubuque, Iowa.
Banner Repair Parts Co., Youngstown, Ohio.
Brauer Supply Co., A. G., St. Louis, Mo.
Central Furnace & Stove Repair Co., St. Louis, Mo.
Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.
Eselgroth & Co., Newark, N. J.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Faultless Heater Corp., Cleveland, Ohio.
Foote Foundry Co., J. B., Fredericktown, Ohio.
Heating Wholesalers Co., Des Moines, Ia.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Kramer Bros. Foundry Co., Dayton, Ohio.
Livingston, Inc., Marshall, Mich.
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
National Foundry & Furnace Co., Dayton, Ohio.
Northwestern Stove Repair Co., Chicago, Ill.
Peerless Furnace and Foundry Co., Indianapolis, Ind.
Peninsular Stove Co., Detroit, Mich.
Pittsburgh Furnace Parts Co., Pittsburgh, Pa.
Portland Stove Foundry Co., Portland, Maine.
Smith Furnace Co., New Castle, Pa.

RETURN AIR FACES AND INTAKES

See Faces, Return Air

RIDGE ROLL, SHEET METAL

Alabama Metal Lath Co., Birmingham, Ala. (Steel)
American Steel Band Co., Pittsburgh, Pa.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv. stainless steel & copper)
Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Inland Steel Products Co., Milwaukee, Wis. (Galv. & copper)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
New Delphos Mfg. Co., Delphos, Ohio. (Galv. steel)
Newport Rolling Mill Co., Newport, Ky.
Nichols Wire & Aluminum Co., Davenport, Iowa. (Aluminum)
Northwest Metal Products, Inc., Seattle, Wash. (Galv. & copper)
Plasteel Products Co., Washington, Pa.
Quaker State Metals Co., Lancaster, Pa. (Aluminum)
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. steel)
Republic Steel Corp., Cleveland, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Riggin Metal Products, Kankakee, Ill.
St. Paul Corrugating Co., St. Paul, Minn. (Galv. steel)
Schoedinger, F. O., Columbus, Ohio. (Galv. & stainless steel, & copper)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y. (Copper, aluminum, & steel)
Sioux Steel Co., Sioux City, S. D. (Galv. & copper)
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo. (Galv.)
Southern States Iron Roofing Co., Savannah, Ga. (Aluminum & galvanized steel)
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio. (Galv. copper, stainless steel, aluminum)
United States Steel Co., Pittsburgh, Pa. (Galv. steel)
Van Noorden Co., E., Boston, Mass.
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Galvanized)
Wheeling Corrugating Co., Wheeling, W. Va. (Galv. steel)

RIDGE VENTILATORS

See Ventilators, Roof

RIVETS, ALLOY

Bethlehem Steel Co., Bethlehem, Pa.
Clark Bros. Bolt Co., Milldale, Conn.
General Plate Div., Metals & Controls Corp., Attleboro, Mass. (Silver)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Republic Steel Corp., Cleveland, Ohio.
Rhodes & Co., J. C., Branch of United Shoe Machinery Corp., New Bedford, Mass. (Monel)
Townsend Co., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

RIVETS, ALUMINUM

Aluminum Co., of America, Pittsburgh, Pa.
Chicago Rivet & Machine Co., Bellwood, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
du Pont de Nemours & Co., Inc. E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, Ohio. (Blind)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Reynolds Metals Co., Louisville, Ky.
Rhodes & Co., J. C., Branch of United Shoe Machinery Corp., New Bedford, Mass.
Southco Div., South Chester Corp., Philadelphia, Pa., (Blind)
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

RIVETS, BRASS OR COPPER

Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Rivet & Machine Co., Bellwood, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
du Pont de Nemours & Co., Inc., E. I., Wilmington, Del. (Explosive)
Goodrich Co., B. F., Akron, Ohio. (Blind-Brass)
Harper Co., H. M., Morton Grove, Ill.
Hassall, Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
Taunton & Co., Inc., John H., New York, N. Y.
Townsend Co., New Brighton, Pa.
Tubular Rivet & Stud Co., Wollaston, Mass.

RIVETS, IRON

Chicago Rivet & Machine Co., Bellwood, Ill.
Hassall Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich.
Townsend Co., New Brighton, Pa.

RIVETS, STEEL

Bethlehem Steel Co., Bethlehem, Pa.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cherry Rivet Co., Los Angeles, Calif. (Blind)
Chicago Rivet & Machine Co., Bellwood, Ill.
Clark Bros. Bolt Co., Milldale, Conn.
Goodrich Co., B. F., Akron, Ohio.
Hassall Inc., John, Brooklyn, N. Y.
Huck Mfg. Co., Detroit, Mich. (Blind)
Republic Steel Corp., Cleveland, Ohio.
Townsend Co., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif. (Blind)
Tubular Rivet & Stud Co., Wollaston, Mass.

ROD, WELDING

Air Reduction Sales Co., New York, N. Y.
All-State Welding Alloys Co., Inc., White Plains, N. Y.
American Agile Corp., Bedford, Ohio.
American Brass Co., New York, N. Y.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Arcos Corp., Philadelphia, Pa. (Stainless steel)
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Crucible Steel Co., Pittsburgh, Pa. (Stainless steel)
Delta Power Tool Div., Rockwell Mfg. Co., Pittsburgh, Pa.
Dow Chemical Co., Midland, Mich. (Magnesium)
Eutectic Welding Alloys Corp., Flushing, N. Y.
Harnischfeger Corp., Milwaukee, Wis.
Hobart Bros. Co., Troy, Ohio.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Lincoln Electric Co., Cleveland, O.
Linde Air Products Co., New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metal & Thermit Corp., New York, N. Y.
Modern Engineering Co., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
National Cylinder Gas Co., Chicago, Ill.
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa.
Revere Copper & Brass Inc., New York, N.Y.
Sight Feed Generator Co., West Alexandria, Ohio.
Sightmaster of California Co., Santee, Calif.
Smith Corp., A. O., Milwaukee, Wis.
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
United Wire & Supply Corp., Providence, R. I.
W W Alloys, Inc., Div. Fansteel Metallurgical Corp., Detroit, Mich.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ROOF CEMENT

See Cement, Roof

ROOF TRIM (MOULDINGS), STEEL, EAVES AND RAKES

Alabama Metal Lath Co., Birmingham, Ala.
Appleton Supply Co., Inc., Appleton, Wis. (Starter strip)
Inland Steel Products Co., Milwaukee, Wis. (Eaves)
New Delphos Mfg. Co., Delphos, O.
Northwest Metal Products, Inc., Seattle, Wash.
Obdyke, Inc., B. P., Philadelphia, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Republic Steel Corp., Cleveland, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Sioux Steel Co., Sioux Falls, S. D.
Southern States Iron Roofing Co., Savannah, Ga.
Wheeling Corrugating Co., Wheeling, W. Va.

ROOF VENTILATORS

See Ventilators, Roof

ROOFING, BUILT-UP

See Felt, Roofing

ROOFING MACHINES

See Machines, Sheet Metal Working, Pan Forming

ROOFING, SHEET METAL, ALUMINUM

Aluminum Co., of America, Pittsburgh, Pa.
Cheney Flashing Co., Trenton, N. J.
Fingles Co., Baltimore, Md.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Quaker State Metals Co., Lancaster, Pa.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reynolds Metals Co., Louisville, Ky.
Southern States Iron Roofing Co., Savannah, Ga.
Tiffin Art Metal Co., Tiffin, Ohio.

ROOFING, SHEET METAL, COPPER

American Brass Co., New York, N. Y.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N.Y.
Edwards Mfg. Co., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Hussey & Co., C. G., Pittsburgh, Pa.
Klauer Mfg. Co., Dubuque, Iowa.
Overly Mfg. Co., Greensburg, Pa.
Perkinson, William J., Chicago, Ill.
Revere Copper & Brass Inc., New York, N.Y.

ROOFING, SHEET METAL, LEAD

Alpha Metals, Inc., Jersey City, N. J.
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Coated copper)
Division Lead Co., Summit, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Empire Metal Co., Syracuse, N. Y.
Federated Metals Div. American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Illinois Zinc Co., Chicago, Ill.
Kirk & Son, Morris P., Los Angeles, Calif. (copper, galv iron)
National Lead Co., New York, N. Y.
Northwest Lead Co., Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn, N. Y.

ROOFING, SHEET METAL, MONEL

Fingles Co., Baltimore, Md.
International Nickel Co., Inc., New York, N. Y.
Overly Mfg. Co., Greensburg, Pa.

ROOFING, SHEET METAL, STEEL, GALVANIZED

Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co., Cincinnati, Ohio.
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Braden Mfg. Co., Inc., Terre Haute, Ind.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Goldsmith Metal Lath Co., Cincinnati, Ohio.
Granite City Steel Co., Granite City, Ill. (Corrugated)
Inland Steel Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind.
Klauer Mfg. Co., Dubuque, Iowa.
La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
Lyon, Conklin & Co., Inc., Baltimore, Md.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Plasteel Products Corp., Washington, Pa. (Protected)
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Roofing & Supply Co., Chattanooga, Tenn.
Sioux Steel Co., Sioux Falls, S. D.
St. Paul Corrugating Co., St. Paul, Minn.
Souther Iron Co., E. E., St. Louis, Mo.
Southern States Iron Roofing Co., Savannah, Ga.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
Tiffin Art Metal Co., Tiffin, Ohio.
Truscon Steel Div., Republic Steel Corp., Youngstown, O.
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.

ROOFING, SHEET METAL, STEEL, PROTECTIVE COATED

Airtherm Mfg. Co., St. Louis, Mo.
American Steel Band Co., Pittsburgh, Pa.
Fingles Co., Baltimore, Md.
Plasteel Products Corp., Washington, Pa.
Robertson Co., H. H., Pittsburgh, Pa.

ROOFING, SHEET METAL, STEEL, TERNE PLATE

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Fingles Co., Baltimore, Md.
Follansbee Steel Corp., Pittsburgh, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
Lyon, Conklin & Co., Inc., Baltimore, Md.
New Delphos Mfg. Co., Delphos, Ohio.
Roofing & Supply Co., Chattanooga, Tenn.
Sioux Steel Co., Sioux Falls, S. D.
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Wheeling Metal & Mfg. Co., Moundsville, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ROOFING, SHEET METAL, STEEL, TIN PLATE

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Klauer Mfg. Co., Dubuque, Iowa.
Lyon, Conklin & Co., Inc., Baltimore, Md.
Perkinson, William J., Chicago, Ill.
Sioux Steel Co., Sioux Falls, S. D.
United States Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

ROOFING, SHEET METAL, ZINC

Barnes Metal Products Co., Chicago, Ill.
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Empire Metal Co., Syracuse, N. Y.
Illinois Zinc Co., Chicago, Ill.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York, N. Y.
Perkinson, William J., Chicago, Ill.
Potts-Farrington Co., Philadelphia, Pa.
Roofing & Supply Co., Chattanooga, Tenn.

ROOM THERMOSTATS

See Controls, Thermostats

ROUND DUCT, PREFABRICATED

See Duct and Duct Fittings, Prefabricated

ROUND DUCT SYSTEM, PACKAGED

See Systems, Heating, Small Pipe

RUST PROTECTION FOR METALS

See Chemicals, Rust Preventive

SANDERS

See Buffers, Grinders, Polishers and Sanders

SAVERS, HEAT

See Recoverers, Heat

SAWS, BAND, SHEET METAL CUTTING

See Machines, Sheet Metal

SCREENS, SUN REFLECTING

Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.

SCREWS, SHEET METAL

All Metal Screw Products Co., Inc., New York, N. Y.
American Screw Co., Willimantic, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Clark Bros. Bolt Co., Milldale, Conn.
Continental Screw Co., New Bedford, Mass.
Elco Tool & Screw Corp., Rockford, Ill.
Harper Co., H. M., Morton Grove, Ill.
Independent Nail & Packing Co., Bridgewater, Mass.
Industrial Screw Co., Chicago, Ill.
National Lock Co., Inc., Rockford, Ill.
Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
Pheoll Mfg. Co., Chicago, Ill.
Rockford Screw Products, Co., Rockford, Ill.
Roofing & Supply Co., Chattanooga, Tenn.
Set Screw & Mfg. Co., Bartlett, Ill.
Shakeproof Div., Illinois Tool Wks., Chicago, Ill.
Star Stainless Screw Co., Paterson, N. J.
United States Register Co., Battle Creek, Mich.

SEALS FOR REGISTERS

Excel Heating & Air Conditioning Co., Chicago, Ill.
Sponge Rubber Products Co., Shelton, Conn.

SEAMER MACHINES

See Machines, Seaming

SETTING DOWN MACHINES

See Machines, Setting Down

SHEARS AND PUNCHES COMBINED

See Punches and Shears Combined

SHEARS, HAND AND BENCH

See Snips and Shears, Bench and Hand

SHEET METAL PANELS FOR CURTAIN WALL

See Panels, Curtain Wall

SHEETS, METAL, ALUMINUM

Aluminum Co. of America, Pittsburgh, Pa.
American Nickeloid Co., Peru, Ill.
Apollo Metal Works, Chicago, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Fairmont Aluminum Co., Fairmont, W. Va.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Lustrik, Inc., Philadelphia, Pa.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Quaker State Metals Co., Lancaster, Pa.
Ralph Mfg. Co., Wadsworth, Ohio.
Revere Copper & Brass Inc., New York, N .Y. (Coiled sheets)
Reynolds Metals Co., Louisville, Ky. (Corrugated)
Rigidized Metals Corp., Buffalo, N. Y.
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.

SHEETS, METAL, CLAD

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless steel)
Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
American Nickeloid Co., Peru, Ill. (Nickel, chromium, brass & copper)
Division Lead Co., Summit, Ill. (Lead)
General Plate, Div. Metals & Controls Corp., Attleboro, Mass.
Handy & Harman, New York, N. Y.
Ingersoll Steel Div. Borg-Warner Corp., Chicago, Ill.
Jessop Steel Co., Washington, Pa. (Stainless)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Lukens Steel Co., Coatesville, Pa. (Nickel, Monel, Inconel & stainless steel)
Rigidized Metals Corp., Buffalo, N. Y.
Wood Steel Co., Alan, Conshohocken, Pa. (Stainless steel)

SHEETS, METAL, COPPER

American Brass Co., New York, N. Y.
American Nickeloid Co., Peru, Ill.
Apollo Metal Works, Chicago, Ill.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Cheney Flashing Co., Trenton, N. J.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Weirton Steel Co., Weirton, W. Va. (Electrolitic Zinc Coated)
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill.

SHEETS, METAL, COPPER, LEAD COATED

American Brass Co., Waterbury, Conn.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Lamb & Ritchie Co., Cambridge, Mass.

Ledcote Products Co., Long Island City, N. Y.
Revere Copper & Brass Inc., New York, N. Y.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.

SHEETS, METAL, LEAD

Alpha Metals, Inc., Jersey City, N. J.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Division Lead Co., Summit, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Empire Metal Co., Syracuse, N. Y.
Federated Metals Div., American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Illinois Zinc Co., Chicago, Ill.
Kirk & Son, Morris, P., Los Angeles, Calif.
National Lead Co., New York, N. Y.
Northwest Lead Co., Seattle, Wash.
Standard Rolling Mills, Inc., Brooklyn, N. Y.
Weirton Steel Co., Weirton, W. Va. (Alloy coated)

SHEETS, METAL, SPECIAL METAL

American Brass Co., New York, N. Y. (Copper-silicon alloys)
American Silver Co., Inc., Flushing, N. Y.
Bethlehem Steel Co., Bethlehem, Pa. (Nickel—Chromium)
Cheney Flashing Co., Trenton, N. J. (Copper-zinc alloy)
Division Lead Co., Summit, Ill. (Non-ferrous)
Dow Chemical Co., Midland, Mich. (Magnesium)
Handy & Harman, New York, N. Y. (Silver, gold-silver alloys)
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Lukens Steel Co., Coatesville, Pa. (Monel & Inconel)
Maysteel Products, Inc., Milwaukee, Wis.
National Sheet Metal Co., Peru, Ill. (Electro-Plated)
Revere Copper & Brass Inc., New York, N. Y. (Copper alloys)
Rigidized Metals Corp., Buffalo, N. Y. (Titanium)
Robertson Co., H. H., Pittsburgh, Pa. (Protected)
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill. (Brass, bronze, phosphor bronze)
Youngstown Sheet & Tube Co., Youngstown, O.

SHEETS, METAL, STEEL, ALUMINUM COATED

Armco Steel Corp., Middletown, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.

SHEETS, METAL, STEEL, BLACK

Bethlehem Steel Co., Bethlehem, Pa.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Follansbee Steel Corp., Pittsburgh, Pa.
Inland Steel Products Co., Milwaukee, Wis.
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
New Delphos Mfg. Co., Delphos, O.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Pittsburgh Steel Co., Pittsburgh, Pa.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
U.S. Steel Co., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.
Wood Steel Co., Alan, Conshohocken, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

SHEETS, METAL, STEEL, BLUE, POLISHED

Follansbee Steel Corp., Pittsburgh, Pa.
Granite City Steel Co., Granite City, Ill.
Inland Steel Products Co., Milwaukee, Wis.
Reeves Steel & Mfg. Co., Dover, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.

SHEETS, METAL, STEEL, COPPER BEARING, GALVANIZED

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago, Ill. (Copper alloy & zinc alloy)
International Steel Co., Evansville, Ind.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Sharon Steel Co., Sharon, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

SHEETS, METAL, STEEL, CORRUGATED

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa. (Galv.)
Inland Steel Products Co., Milwaukee, Wis.
International Steel Co., Evansville, Ind.
Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Black)
New Delphos Mfg. Co., Delphos, Ohio. (Galv.)
Newport Steel Corp., Newport, Ky. (Galv. & black)
Niles Rolling Mill Co., Niles, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio. (Galv. & black)
Republic Steel Corp., Cleveland, Ohio. (Galv.)
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa. (Galv. & black)
Weirton Steel Co., Weirton, W. Va. (Galv.)
Wheeling Corrugating Co., Wheeling, W. Va.

SHEETS, METAL, STEEL, GALVANIZED

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Inland Steel Co., Chicago, Ill.
International Rolling Mill Products Corp., Chicago, Ill.
International Steel Co., Evansville, Ind.
New Delphos Mfg. Co., Delphos, Ohio.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Reeves Steel & Mfg. Co., Dover, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.

SHEETS, METAL, STEEL, GALVANNEALED

Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif.
Continental Steel Corp., Kokomo, Ind.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
United States Steel Co., Pittsburgh, Pa.

SHEETS, METAL, STEEL, PROTECTIVE COATED

American Steel Band Co., Pittsburgh, Pa.
Apollo Metal Works, Chicago, Ill.
Baltimore Porcelain Steel Corp., Baltimore, Md. (Porcelain)
Coated Coil Corp., New York, N. Y.
Mid-America Steel Warehouses, Chicago, Ill.
Plasteel Products Corp., Washington, Pa.
Rigidized Metals Corp., Buffalo, N. Y.
Robertson Co., H. H., Pittsburgh, Pa.
Wheeling Corrugating Co., Wheeling, W. Va.

SHEETS, METAL, STEEL, STAINLESS

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
American Silver Co., Inc., Flushing, N. Y.
Apollo Metal Works, Chicago, Ill.

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Crucible Steel Co., Pittsburgh, Pa.
Eastern Stainless Steel Corp., Baltimore, Md.
Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
International Steel Co., Evansville, Ind.
Jessop Steel Co., Washington, Pa.
Pittsburgh Steel Co., Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
Superior Steel Corp., Pittsburgh, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Universal-Cyclops Steel Corp., Bridgeville, Pa.
Washington Steel Corp., Washington, Pa.

SHEETS, METAL, STEEL, TERNE PLATE

Armco Steel Corp., Middletown, Ohio.
Berger Mfg. Div. of Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Follansbee Steel Corp., Pittsburgh, Pa.
Inland Steel Co., Chicago, Ill.
Newport Steel Corp., Newport, Ky.
Niles Rolling Mill Co., Niles, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Roofing & Supply Co., Chattanooga, Tenn.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

SHEETS, METAL, STEEL, TIN PLATE

Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Granite City Steel Co., Granite City, Ill.
Inland Steel Co., Chicago, Ill.
Jones & Laughlin Steel Corp, Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Rigidized Metals Corp., Buffalo, N. Y.
Sharon Steel Corp., Sharon, Pa.
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
United States Steel Co., Pittsburgh, Pa.
Weirton Steel Co., Weirton, W. Va.
Wheeling Corrugating Co., Wheeling, W. Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

SHEETS, METAL, ZINC

American Nickeloid Co., Peru, Ill.
Apollo Metal Works, Chicago, Ill.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Empire Metal Co., Syracuse, N. Y.
Hegeler Zinc Co., Danville, Ill.
Illinois Zinc Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.
Matthiessen & Hegeler Zinc Co., La Salle, Ill.
New Jersey Zinc Co., New York, N. Y.
Potts-Farrington Co., Philadelphia, Pa.
Rigidized Metals Corp., Buffalo, N. Y.

SHEETS, NON-METALLIC

Acme Asbestos Covering & Flooring Co., Chicago, Ill. (Asbestos cement).
Alsynite Co. of America, San Diego, Calif. (Translucent fiberglass)
Carey Mfg. Co., Philip, Cincinnati, Ohio. (Asbestos cement)
Celotex Corp., Chicago, Ill.
Continental-Diamond Fibre Co., Newark, Del.
Johns-Manville, New York, N. Y. (Asbestos cement)
Keasbey & Mattison Co., Ambler, Pa. (Asbestos)
Keystone Asphalt Products Co., Chicago, Ill.
Masonite Corp., Chicago, Ill. (Wood fiber)
Meadows, Inc., W. R., Elgin, Ill.
Norristown Magnesia & Asbestos Co., Norristown, Pa. (Asbestos)
Panelyte Div., St. Regis Paper Co., New York, N. Y. (Plastic)
Rohm & Haas Co., Philadelphia, Pa. (Plastic)
Ruberoid Co., New York, N. Y. (Asbestos cement; flat & corrugated)
Sall Mountain Co., Hamilton, O. (Asbestos)
Steelcraft Mfg. Co., Rossmoyne, O. (Corrugated asbestos)
Wilson, Inc., Grant, Chicago, Ill. (Asbestos)

SHEETS, TRANSLUCENT

See Panels, Plastic, Translucent Material

SHIELDS, WARM AIR REGISTER

Savage Co. W. J., Knoxville, Tenn.

SHINGLES AND TILE, METAL

Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galv.)
Edwards Mfg. Co., Inc., Cincinnati, Ohio. (Galv. steel, tin, zinc, aluminum & copper)
Fingles Co., Baltimore, Md. (All metals)
Matthiessen & Hegeler Zinc Co., La Salle, Ill. (Zinc)
Miller & Doing, Brooklyn, N. Y.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Southern States Iron Roofing Co., Savannah, Ga. (Steel & aluminum)
Wheeling Corrugating Co., Wheeling, W. Va., (Steel shingles)
Wallace Co., William, Metalbestos Div., Belmont, Calif. (Painted tin and galv.)

SHUTTERS, DUCT, AUTOMATIC

See Louvers and Shutters, Automatically Controlled

SHUTTERS, DUCT, MANUAL

See Louvers and Shutters, Manually Controlled

SHUTTERS, EXTERIOR WALL

See Louvers and Shutters

SKYLIGHT LIFTS

See Lifts, Skylight

SKYLIGHTS

Acme Mfg. Co., Philadelphia, Pa.
Alsynite Co. of America, San Diego, Calif.
American Steel Band Co., Pittsburgh, Pa.
Biersach & Niedermeyer Co., Milwaukee, Wis.
Danzer Metal Works Co., Hagerstown, Md.
Fingles Co., Baltimore, Md.
Gehri Co., Tacoma, Wash.
General Sheet Metal Works, Inc., Bridgeport, Conn. (Puttyless)
Hirschman-Pohle Co., Inc., LeRoy, N. Y. (Puttyless)
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Moeschl-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
Overly, Lloyd H., Maryville, Tenn. (Plastic)
Overly Mfg. Co., Greensburg, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Riester & Thesmacher Co., Cleveland, Ohio.
Riggin Metal Products, Kankakee, Ill.
Robertson Co., H. H., Pittsburgh, Pa. (Structural)
St. Paul Corrugating Co., St. Paul, Minn.
Schoedinger, F. O., Columbus, Ohio.
Sioux Steel Co., Sioux Falls, S. D.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo.
Steelcraft Mfg. Co., Rossmoyne, O.
Tiffin Art Metal Co., Tiffin, Ohio.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Vent-O-Lite Co., Chicago, Ill. (Puttyless)
Wasco Flashing Co., Cambridge, Mass.
Willis Steel Corp., Galesburg, Ill.
York Corrugating Co., York, Pa.

SLITTING MACHINES

See Machines, Slitting

SMOKE PIPE

See Pipe and Fittings, Smoke

SNIPS AND SHEARS, BENCH AND HAND

Bartlett Mfg. Co., Detroit, Mich.
Berridge Shear Co., Sturgis, Mich. (Hand)
Beverly Shear Mfg. Co., Chicago, Ill.
Bremil Mfg. Co., Erie, Pa. (Shears)
Compton Shear Co., W. H., Newark, N. J.
Crescent Tool Co., Jamestown, N. Y.
Heinrich Tools, Inc., Racine, Wis.

Henkel-Clauss Co., Fremont, Ohio. (Hand)
Kidder Mfg. Co., Inc., J. F., Burlington, Vt.
Klenk's Aviation Snips, Wilmington, Del.
Lincoln Machine Co., Boston, Mass.
Niagara Machine & Tool Works, Buffalo, N. Y.
O'Neil-Irwin Mfg. Co., Lake City, Minn.
Peck, Stow & Wilcox Co., Southington, Conn.
Penn Tool Co., Philadelphia, Pa.
Proto Tools, Los Angeles, Calif.
Roto-Table Co., Dayton, Ohio. (Double cutting, notching, nibbling & dovetailing)
Snap-On Tools Corp., Kenosha, Wis.
Viking Shear Co., Erie, Pa. (Shears)
Whitney Mfg. Co., W. A., Rockford, Ill.
Wiss & Sons Co., J., Newark, N. J.

SNOW GUARDS

See Guards, Snow

SOLDER, ALUMINUM

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
American Solder & Flux Co., Philadelphia, Pa.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Division Lead Co., Summit, Ill.
Empire Metal Co., Syracuse, N. Y.
Farrelloy Co., Philadelphia, Pa.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Johnson Mfg. Co., Inc., Mt. Vernon, Ia.
Kester Solder Co., Chicago, Ill.
Lenk Mfg. Co., Boston, Mass.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Metalloy Products Co., Los Angeles, Calif.
Modern Engineering Co., St. Louis, Mo.
Okun Co., A. L., So. Ozone Park, N. Y.
Sightmaster of California Co., Santee, Calif.

SOLDER, LEAD-TIN

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
American Products Corp., Chicago, Ill.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Smelting & Refining Corp., Chicago, Ill.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Division Lead Co., Summit, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Empire Metal Co., Syracuse, N. Y.
Eutectic Welding Alloys Corp., Flushing, N. Y.
Farrelloy Co., Philadelphia, Pa.
Federated Metals Div., American Smelting & Refining Co., New York, N. Y.
Flemm Lead Co., Inc., Long Island City, N. Y.
Fusion Engineering, Cleveland, O.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Johnson Gas Appliance Co., Cedar Rapids, Ia.
Kester Solder Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.
Klauer Mfg. Co., Dubuque, Ia.
Lenk Mfg. Co., Boston, Mass.
London Chemical Co., Chicago, Ill.
Lukens Metal Co., Thos. F., Philadelphia, Pa.
Mueller Brass Co., Port Huron, Mich.
National Lead Co., New York, N. Y.
New Delphos Mfg. Co., Delphos, O.
Northwest Lead Co., Seattle, Wash.
Ohmer Co., Geo. H., Dayton, O.
Okun Co., A. L., So. Ozone Park, N. Y.
Ruby Chemical Co, Columbus, O.
Standard Rolling Mills, Inc., Brooklyn, N. Y.
Tinit Mfg. Co., Inc., Denver, Colo.

SOLDER, SILVER

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Empire Metal Co., Syracuse, N. Y.
General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Handy & Harman, New York, N. Y.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Mueller Brass Co., Port Huron, Mich.
United Wire & Supply Corp., Providence, R. I.

SOLDER, STAINLESS STEEL

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Allen Co., L. B., Chicago, Ill.
Alpha Metals, Inc., Jersey City, N. J.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Division Lead Co., Summit, Ill.
Empire Metal Co., Syracuse, N. Y.
Johnson Mfg. Co., Inc., Mt. Vernon, N. Y.
Kester Solder Co., Chicago, Ill.
Kirk & Son, Inc., Morris P., Los Angeles, Calif.

SOLDER, ZINC

All-State Welding Alloys Co., Inc., White Plains, N. Y.
Anchor Metal Co., Brooklyn, N. Y.
Atlas Welding Accessories Co., Ferndale, Mich.
Division Lead Co., Summit, Ill.
Empire Metal Co., Syracuse, N. Y.
Glaser Lead Co., Inc., Brooklyn, N. Y.
Sightmaster of California Co., Santee, Calif.

SOLDERING COPPERS

See Coppers, Soldering

SOLDERING FLUX

See Flux

SOLDERING FURNACES

See Furnaces, Soldering

SOLDERING TORCHES

See Torches, Soldering

SOLENOID VALVES

See Valves, Solenoid

SOLVENTS, TANK, FUEL OIL

Ampion Corp., Long Island City, N. Y.
Barclay, Inc., Robert, Chicago, Ill.
Celco Corp., New York, N. Y.
Moreheat Distribution Co., Cincinnati, O.
North American Mogul Products Co., Cleveland, O.
Pennsylvania Refining Co., Ohio Div., Cleveland, O.
Petroleum Solvent Corp., New York, N. Y.
Radiator Specialty Co., Charlotte, N. C.
Red Wing Oil Burner Co., Inc., Medford, Mass.
S. O. S. Products Co., Inc., Brooklyn, N. Y.
Saginaw Salt Products Co., Saginaw, Mich.
Shell Oil Co., New York, N. Y.

SOOT REMOVER

See Remover, Soot

SPOT WELDERS

See Welders, Spot

SPRAY GUNS

See Guns, Spray

STAINLESS STEEL SHEETS

See Sheets, Metal, Steel, Stainless

STAMPINGS, METAL

Ackermann Mfg. Co., Wheeling, W. Va.
Acme Mfg. Co., Philadelphia, Pa.
Aluminum Co. of America, Pittsburgh, Pa.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bossert Div., Rockwell Spring and Axle Co., Utica, N. Y.
Burgess-Norton Mfg. Co., Geneva, Ill.
Campbell Stainless Products Co., Washington, Pa. (Stainless steel letters)
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Chicago Metal Mfg. Co., Chicago, Ill. (Rings)
Commercial Shearing & Stamping Co., Youngstown, Ohio.
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Dayton Rogers Mfg. Co., Minneapolis, Minn.
Detroit Stamping Co., Detroit, Mich.

Division Lead Co., Summit, Ill.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Duro-Dyne Corp., Hempstead, L.I., N. Y. (Vane rails)
Edwards Mfg. Co., Inc., Cincinnati, Ohio.
Elgen Mfg. Corp., Long Island City, N. Y. (Vane runners)
Falstrom Co., Passaic, N. J.
Globe Machine & Stamping Co., Cleveland, Ohio.
H P L Mfg. Co., Cleveland, Ohio.
Hupp Corp., Globe Stamping Div., Cleveland, Ohio.
Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Ledcote Products Co., Long Island City, N. Y.
Lukens Steel Co., Coatesville, Pa.
Maysteel Products, Inc., Milwaukee, Wis.
Mechanical Products Co., Seattle, Wash.
Miller & Doing, Brooklyn, N. Y.
Morrison Products Inc., Cleveland, Ohio.
Morrison Steel Products, Inc., Buffalo, N. Y.
Moss Industries, Inc., Brooklyn, N. Y.
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
National Metal Fabricators, Chicago, Ill.
New Delphos Mfg. Co., Delphos, Ohio.
New Monarch Machine & Stamping Co., Des Moines, Iowa.
Northwest Metal Products, Inc., Seattle, Wash.
Paine Co., Addison, Ill.
Radiation Furnace Corp., Benton Harbor, Mich.
Reichert Float & Mfg. Co., Toledo, O.
Republic Steel Corp., Cleveland, O.
Revere Copper & Brass Inc., New York, N. Y. (Copper & copper alloy)
Reynolds Metals Co., Louisville, Ky.
Shakeproof Div., Illinois Tool Works, Chicago, Ill.
Small Lot Stamping Co., Linden, N. J.
Standard Stamping & Perforating Co., Chicago, Ill.
Steinen Mfg. Co., Wm., Newark, N. J.
Tannewitz Works, Grand Rapids, Mich.
United-Carr Fastener Corp., Cambridge, Mass.
United States Register Co., Battle Creek, Mich.
Western Brass Mills, Metals Div. Olin Industries, Inc., East Alton, Ill.
Wheeling Corrugating Co., Wheeling, W. Va.
Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., New York, N. Y.
Worcester Pressed Steel Co., Worcester, Mass.
York Corrugating Co., York, Pa.
Youngstown Sheet & Tube Co., Youngstown, Ohio.
Ziegler-Harris Co., Burbank, Calif.

STAMPINGS, STEEL FURNACE

Ackermann Mfg. Co., Wheeling, W. Va.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Commercial Shearing & Stamping Co., Youngstown, Ohio. (Heads for furnace domes & crescent radiators)
Mohawk Metal Products Co., Frankfort, N. Y. (Furnace shells and radiators)
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
Radiation Furnace Corp., Benton Harbor, Mich.

STEEL TUBING

See Tubing, Steel

STERILIZERS, AIR

See Lamps, Germicidal; Blower-Filter Units Equipped With Germicidal Apparatus

STOKER CONTROLS

See Controls; Control Systems

STOKERS, DOMESTIC

Up to 61 lb per Hour

Allen Stoker Co., Allentown, Pa. (Anthracite)
American Furnace Co., St. Louis, Mo.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Black Diamond Stoker Co., Sioux City, Iowa.
Canton Stoker Corp., Canton, Ohio.
Carpenter Heating & Stoker Co., Cleveland, Ohio.
Central Rubber & Steel Corp., Findlay, Ohio.
Cooper Stoker Co., Pittsfield, Mass. (Anthracite)
Cotta Transmission Co., Rockford, Ill.
Crane Co., Chicago, Ill.
Diamond Iron Works, Inc., Minneapolis, Minn.
Eddy Stoker Corp., Chicago, Ill.
Electric Furnace-Man, Inc., Emmaus, Pa.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Frederick Iron & Steel, Inc., Frederick, Md.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heating Assurance, Inc., Spokane, Wash.
Heating Wholesalers Co., Des Moines, Ia.
Hemp & Co., Inc., Macomb, Ill.
Hershey Machine & Foundry Co., Manheim, Pa.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Keith Furnace Co., Des Moines, Iowa.
Kingston Products Corp., Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Iowa.
Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, Ohio.
Nelson Bros. & Strom Co., Racine, Wis. (Bituminous)
Northern Steel & Stoker Corp., Peoria, Ill.
Plymouth Industries, Inc., Plymouth, Ind.
Premium Coal & Oil Co., Cincinnati, Ohio.
Quick Furnace & Supply Co., Des Moines, Iowa.
Schwab Furnace Co., Milwaukee, Wis.
Schwab Safe Co., Lafayette, Ind.
Souther Iron Co., E. E., St. Louis, Mo.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corp., New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, Ohio.
U. S. Machine Corp., Lebanon, Ind.
Whiting Fire Power Products Corp., Superior, Wis.
Will-Burt Co., Orrville, Ohio.
Worsham Co., Inc., Long Beach, Calif.

STOKERS, INDUSTRIAL AND COMMERCIAL

61 lb to 300 lb per Hour

American Engineering Co., Philadelphia, Pa.
Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Auburn Burner Co., Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Automatic Firing Corp., St. Louis, Mo.
Black Diamond Stoker Co., Sioux City, Iowa.
Canton Stoker Corp., Canton, Ohio.
Carpenter Heating & Stoker Co., Cleveland, Ohio.
Central Rubber & Steel Corp., Findlay, Ohio.
Chicago Automatic Stoker Co., Inc., Chicago, Ill.
Cooper Stoker Co., Pittsfield, Mass. (Anthracite)
Cotta Transmission Co., Rockford, Ill.
Detroit Stoker Co., Detroit, Mich.
Diamond Castings Co., Johnsonburg, Pa.
Diamond Iron Works, Inc., Minneapolis, Minn.
Eddy Stoker Corp., Chicago, Ill.
Electric Furnace-Man, Inc., Emmaus, Pa.
Flynn & Emrich Co., Baltimore, Md.
Frederick Iron & Steel, Inc., Frederick, Md.
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo.
Fuel Savers, Inc., Harrisburg, Pa.
Gehl Bros. Mfg. Co., West Bend, Wis.
General Machinery Co., Spokane, Wash.
Gross-Aire Mfg. Co., St. Louis, Mo.
Hall-Neal Furnace Co., Indianapolis, Ind.
Heating Assurance Inc., Spokane, Wash.
Hershey Machine & Foundry Co., Manheim, Pa.
Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Iron Fireman Mfg. Co., Cleveland, Ohio.
Kingston Products Corp., Tipton, Ind.
Kol-Master Corp., Oregon, Ill.
Leas Co., H. Leslie, Monona, Iowa.
Meyer Furnace Co., Peoria, Ill.
Muncie Gear Works, Inc., Muncie, Ind.
National Steam Pump Co., Upper Sandusky, Ohio.
Nelson Bros. & Strom Co., Racine, Wis. (Bit).
Northern Steel & Stoker Corp., Peoria, Ill.
Ormsby-Osterman Co., St. Louis, Mo.
Plymouth Industries, Inc., Plymouth, Ind.
Premium Coal & Oil Co., Cincinnati, Ohio.
Rosedale Foundry & Machinery Co., Pittsburgh, Pa.
Schwab Furnace Co., Milwaukee, Wis.

Schwab Safe Co., Lafayette, Ind.
Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Stoker-Ola Mfg. Co., Peoria, Ill.
Stokol Stoker Co., Inc., Dayton, Ohio.
Sun-Fire Stoker Corp., New Albany, Ind.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tropic-Air Stoker Co., Canton, Ohio.
U. S. Machine Corp., Lebanon, Ind.
Westinghouse Electric Corp., Pittsburgh, Pa.
Whiting Fire Power Products Corp., Superior, Wis.
Whitty Co., Inc., Boston, Mass. (Bituminous)
Will-Burt Co., Orrville, Ohio.
Woolley Engineering Co., Detroit, Mich.

STOVES

See Heaters

SUMMER COOLING UNITS

See Units, Air Conditioning

SWITCHES, MAGNETIC, MANUAL, TIME

See Controls

SYSTEMS, HEATING, SMALL PIPE

Consisting of furnace, plenum chamber, takeoff fittings, boots, elbows, small pipe

Berger Furnace Mfg. Co., Pittsburgh, Pa.
Bryant Htg. Div., Affil. Gas Equipment, Inc., Cleveland, Ohio.
Char-Gale Mfg. Co., Minneapolis, Minn.
Coleman Co., Inc., Wichita, Kans.
Delco Appliance Div., General Motors Corp., Rochester, N. Y.
General Automatic Products Corp., Baltimore, Md.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Inland Steel Products Co., Milwaukee, Wis.
J & J Sheet Metal Co., Van Dyke, Mich.
Jettronaire, Inc., Pittsburgh, Pa.
Lennox Furnace Co., Marshalltown, Iowa.
Majestic Co., Inc., Huntington, Ind.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Surface Combustion Corp., Toledo, Ohio.
Williamson Heater Co., Cincinnati, O.

TANK GAUGES, FUEL OIL

See Gauges, Tank, Fuel Oil

TANK SOLVENTS

See Solvents, Tank, Fuel Oil

TANKS, FUEL OIL, ACCESSORIES

Bearlee Products Co., Green Bay, Wis. (Vent caps)
Hays Mfg. Co., Erie, Pa. (Valves and fittings)
Morse-Smith-Morse Co., Watertown, Mass. (Vent caps and valves)
Oil Equipment Mfg. Co., New Haven, Conn. (Oil storage tank fittings)

TANKS, STORAGE, FUEL OIL

Black, Sivalls & Bryson, Inc., Kansas City, Mo.
Kaustine Furnace & Tank Corp., Perry, N.Y.
Mohawk Metal Products Co., Inc., Frankfort, N. Y.
Pennsylvania Furnace & Iron Co., Warren, Pa.
Rheem Mfg. Co., New York, N. Y.
Scaife Co., Oakmont, Pittsburgh District, Pa.

TEES

See Angles, Bars, Beams, Channels, and Tees

TEMPERATURE CONTROLS

See Controls; Control Systems

TEMPERATURE RECORDERS

See Recorders, Temperature

THERMOMETERS, INDICATING

Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Bailey Meter Co., Cleveland, Ohio.
Bristol Co., Waterbury, Conn.
Defender Instrument & Regulator Co., St. Louis, Mo.
Dickson Co., Chicago, Ill.
Fee & Stemwedel, Inc., Chicago, Ill.
Foxboro Co., Foxboro, Mass.
Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.
G. M. Mfg. Co., New York, N. Y.
H-B Instrument Co., Philadelphia, Pa.
Hill & Co., E. Vernon, Lake Geneva, Wis. (Also Kata Thermometers)
Illinois Testing Laboratories, Inc., Chicago, Ill.
Leeds & Northrup Co., Philadelphia, Pa.
Manning, Maxwell & Moore, Inc., Stratford, Conn.
Marsh Corp., Jas. P., Skokie, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Moeller Instrument Co., Richmond Hill, N. Y.
Pacific Transducer Co., Div. Clarkstan Corp., Los Angeles, Calif.
Palmer Thermomters, Inc., Cincinnati, Ohio.
Philadelphia Thermometer Co., Philadelphia, Pa.
Powers Regulator Co., Skokie, Ill. (Dials)
Precision Thermometer & Instrument Co., Philadelphia, Pa.
Preferred Utilities Mfg., Corp., New York, N. Y.
Rochester Mfg. Co., Inc., Rochester, N. Y. (Dials)
Taylor Instrument Companies, Rochester, N. Y.
United States Gauge Div., American Machine & Metals Inc., New York, N. Y.
Weksler Thermometer Corp., New York, N. Y.
Weston Electrical Instrument Corp., Newark, N. J.
Wheelco Instruments Div., Barber-Coleman Co., Rockford, Ill.

THERMOSTATS

See Controls, Thermostats

THROUGH WALL FLASHINGS

See Flashings, Through Wall

TIME SWITCHES

See Controls, Switches, Time

TIMERS, WELDING

Automatic Electric Mfg. Co., Mankato, Minn.
Automatic Temperature Control Co., Inc., Philadelphia, Pa.
Eisler Engineering Co., Newark, N. J.
Electronic Products Co., St. Charles, Ill.
Peer, Inc., Benton Harbor, Mich.
Photoswitch, Inc., Cambridge, Mass.
Sciaky Bros., Inc., Chicago, Ill.
Westinghouse Electric Corp., Pittsburgh, Pa.

TINNING

See Baths, Tinning

TIPS, DAMPER

See Clips and Tips, Damper

TOOLS, OIL BURNER REPAIR

Boston Machine Works, Lynn, Mass. (Nozzle extractor)
Delavan Mfg. Co., West Des Moines, Ia. (Nozzle extractor)

TOOLS, ROOFERS'

Adams Co., Dubuque, Iowa. (Scaffold brackets)
Aeroil Products Co., Inc., South Hackensack, N. J. (Melting kettles, hoists, buckets & accessories)
Ajax Building Bracket Co., Cleveland, Ohio. (Brackets)
Belden Machine Co., New Haven, Conn. (Slater hammers, rippers & stakes)
Connery Construction Co., Philadelphia, Pa. (Kettles)
Efsco Products Co., Syracuse, N. Y. (Roof scrapers)
Frey & Co., Frank P., Chicago, Ill. (All kinds)
Hauck Mfg. Co., Brooklyn, N. Y. (Kettles)
Littleford Bros., Inc., Cincinnati, Ohio. (Roofing kettles)
Matt Coil-Less Burner Co., Chicago, Ill. (Buckets, mops, kettles, etc.)
Melaway Corp., Brandon, Wis.
Moser & Son Mfg. Co., Bluffton, Ind. (Ladder jacks)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Roof brackets & accessories)
Niagara Machine & Tool Works, Buffalo, N. Y. (Double seamers)
Owens-Corning Fiberglas Corp., Toledo, Ohio. (Fiberglas mop yarn)
Peck, Stow & Wilcox Co., Southington, Conn. (Seamers, tongs, etc.)
Rose Mfg. Co., Denver, Colo. (Ladder shoes)
Southbridge Roofing Co., Inc., Southbridge, Mass. (Scrapers, spreaders, fire pots, buckets)
Sperry & Co., D. R., Batavia, Ill. (Kettles
Stortz & Son, Inc., John, Philadelphia, Pa. (Tongs, seamers,

scrapers, jointers, punches, hammers, rippers, stakes)
Structural Slate Co., Pen Argyl, Pa. (Hammers, rippers, stakes, cutters, punches)
Wodack Electric Tool Corp., Chicago, Ill. (Saws)

TOOLS, SHEET METAL WORKERS'

Acro Tool & Die Works, Chicago, Ill. (Portable saw)
Air-Speed Tool Co., Los Angeles, Calif. (Pneumatic file & saw)
Allen, H. D., Los Angeles, Calif., (Template transfer punches)
Atkins Saw Div., Borg-Warner Corp., Indianapolis, Ind. (Band saw & hack saw blades)
Atlas Welding Accessories Co., Ferndale, Mich.
Balmar Corp., Baltimore, Md.
Barth Mfg. Co., Milldale, Conn. (Hand rivet sets, groovers, punches, awls.)
Berridge Shear Co., Sturgis, Mich. (Double cutting pipe snips)
Black & Decker Mfg. Co., Towson, Md. (Automatic screw driver, portable electric tapper, portable jig saw)
Chicago Pneumatic Tool Co., New York, N. Y. (Rivet)
Clark Co., Robert H., Beverly Hills, Calif. (Adjustable hole cutters & circle cutters)
Clark-Hopkins Equipment Corp., Philadelphia, Pa.
Clemson Bros., Inc., Middletown, N. Y. (Hack Saws)
Crandall Mfg. Co., Los Angeles, Calif. (Drill Grinders)
Crescent Tool Co., Jamestown, N. Y. (Scratch awls, pliers, screw drivers, wrenches)
Cummins Portable Tool Co., Chicago, Ill. (Portable electric saw)
Damascus Steel Products Corp., Rockford, Ill. (Punches, chisels, star drills, nippers, etc.)
Davis & Son Machine Works, Los Angeles, Calif. (Clip & button punch)
Desmond-Stephan Mfg. Co., Urbana, O. (Sheet metal worker's vise)
Downs-Smith Brass & Copper Co., Inc., New York, N. Y. (Hammers)
Drilo, Inc., Pittsburgh, Pa. (Screwdriver, chuck and bits for hand drills)
Eriez Mfg. Co., Erie, Pa. (Fanner magnet)
Excelsior Tool and Machine Co., East St. Louis, Ill. (Sheet clamps)
Fairmount Tool & Forging Co., Cleveland, Ohio. (Calking irons, File holders, pliers, solder paddle, chisels, punches, hammers)
Fox Noiseless Hammer Co., Media, Pa. (Seaming hammer)
Frayn Co., N. J., Redwood City, Calif. (Hole cutters)
General Electric Co., Carboloy Dept., Detroit, Mich. (Concrete drills)
Gouran, Mark F., Philadelphia, Pa. (Welding fixtures)
Haines Gauge Co., Inc., Philadelphia, Pa. (Thickness gauges)
Handees Co., Bloomington, Ill. (Truck)
Hanlan Co., Los Angeles, Calif. (Elec. appliance tester)
Harris, A. R., Hammond, Ind. (Snips, clamps, ladder brackets)
Hexdall Co., A. M., Morris, Ill. (Seam openers & hammers)
Hub Specialty Co., Reading, Mass. (Awl).
Interstate Drop Forge Co., Milwaukee, Wis.
Interstate Sales Co., New York, N. Y. (Angle meters & center finders)
Jaco Devices Co., Hingham, Mass. (Portable saw attachment for drill)
Johnson, Inc., Wm., Newark, N. J. (Rivet sets)
Johnson Ladder Shoe Co., Eau Claire, Wis. (Ladder shoes all rubber and vise jaws)
Kennametal Inc., Latrobe, Pa. (Masonry & rock drill bits)
Lander & Abbott, La Crescenta, Calif.
Lane Shur-Grip Tool Co., Chicago, Ill.
Lapeer Mfg. Co., Detroit, Mich. (Vise wrench)
Lufkin Rule Co., Saginaw, Mich. (Rules: tapes, flexible, circumference, etc.; center punches, scribers, etc.)
Lyon Metal Products, Inc., Aurora, Ill. (Stock cart, tool stand, tool boxes & work benches)
Machine Rebuilding Co., Detroit, Mich.
Magnetool Div., Multifinish Mfg. Co., Detroit, Mich. (Magnetic lifter)
Maplewood Machinery Co., Chicago, Ill. (Trammels, marking tools)
Melaway Corp., Brandon, Wis.
Merchandising & Mfg. Associates, Inc., Lancaster, Pa. (Rivet cutters, chisels & joggling blocks)
Mid-States Welder Mfg. Co., Chicago, Ill. (Portable electric saw)
Millers Falls Co., Greenfield, Mass. (Hack saw blades)
Misener Mfg. Co., Inc., Syracuse, N. Y. (Hole saws)
Moser & Son Mfg. Co., Buffton, Ind. (Spouting tripods)
Munton Mfg. Co., Franklin Park, Ill. (Hydraulic vises)
Newark Ladder & Bracket Co., Inc., Clark (Rahway), N. J. (Ladders, scaffolds & accessories)
New England Carbide Tool Co., Cambridge, Mass. (Masonry drill bits)
Niagara Machine & Tool Works, Buffalo, N. Y. (Stakes, hammers, groovers, hollow punches, etc.)
Nobur Mfg. Co., Burbank, Calif. (Deburring tool)
Owens Co., H., Culver City, Calif. (Pattern developer)
Packham Crimper Co., Mechanicsburg, Ohio. (Crimping tongs)
Peck, Stow & Wilcox Co., Southington, Conn. (Hammers, awls, rivet sets, groovers, wing dividers, etc.)
Penn Tool Co., Philadelphia, Pa. (Punches, chisels & edge tools)
Petersen Mfg. Co., Inc., DeWitt, Nebr. (Clamps)
Phillips Drill Co., Michigan City, Ind. (Anchor bolt drills)
Pioneer Tool Co., Racine, Wis. (Pipe crimpers, gutter clamps, adjustable saw handles, scratch awls)
Powers Wire Products Co., Monroe, Mich. (Stapler)
Producers & Distributors, Inc., Allentown, Pa. (Metal cutting saw attachment for electric drill)
Rapidesign, Inc., Glendale, Calif. (Templates)
Rawlplug Co., Inc., New York, N. Y. (Masonry drills)
RCS Tool Sales Corp., Joliet, Ill. (Power portable saw attachment)
Ramset Fasteners, Inc., Cleveland, O. (Powder-actuated)
Reiner & Campbell Co., Inc., Newark, N. J. (Dividers & notchers)
Roesch Tool Products, Los Angeles, Calif (Crimper, clamps)
Rotary Concrete Drill Co., Pasadena, Calif. (Drill bits)
Roto-Table Co., Dayton, Ohio. (Power table for turning machines)
Scheck, William, Ridgefield, N. J. (Punches & Scribers)
Schild Mfg. Co., Dallas, Texas. (Cutters)
Skil Corporation, Chicago, Ill. (Portable power tools)
Sheridan-Gray, Inc., Palos Verdes Estates, Calif.
Smith & Son, Inc., Seymour, Oakville, Conn. (Clamp pliers)
Snap-On Tools Corp., Kenosha, Wis. (Wrenches, hammers, rules, etc.)
Stanley Tools, New Britain, Conn. (Punches, rules, cold chisels, levels, bit braces, squares, screw drivers, bars, hammers)
Stortz & Son, Inc., John, Philadelphia, Pa. (Hammer, punches, chisels, rivet sets)
Termite Drills, Inc., Pasadena, Calif. (Concrete drill bits)
Topflight Tool Co., Huber Bldg., York, Pa. (Jigs, riveters, dimplers, rivet removers, scribing discs)
Tri-Saw Corp., St. Louis, Mo. (Portable power saw)
Utica Drop Forge & Tool Corp., Utica, N. Y. (Non-ferrous lap-welding dies)
Vital Products Mfg. Co., Cleveland, Ohio. (Caulking guns & cartridges)
Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass. (Electric solder pots)
Ward Machinery Co., Chicago, Ill. (Bender)
Wedgelock Co., North Hollywood, Calif. (Jig fasteners)
Whipple Sheet Metal Works, M. S. & L. H., Lansing, Mich. Clamps)
Whitney Mfg. Co., W. A., Rockford, Ill. (Tinner's hammers)
Whitney Metal Tool Co., Rockford, Ill. (Aircraft rivet squeezers, hand seamers, hammers, punches, rivet sets, awls)
Wyzenbeek & Staff, Inc., Chicago, Ill. (Hole cutters, saw attachments)

TOPS, CHIMNEY

See Caps and Tops, Chimney

TORCHES, BRAZING, CUTTING, WELDING AND OXY-ACETYLENE

Aeroil Products Co., Inc., South Hackensack, N. J.
Air Reduction Sales Co., New York, N. Y.
American Products Corp., Chicago, Ill. (Alcohol)
Bastian-Blessing Co., Chicago, Ill.
Borm Mfg. Co., Elgin, Ill.
Dockson Corp., Detroit, Mich.
Ergolyte Mfg. Co., Philadelphia, Pa. (Electric)
Eutectic Welding Alloys Corp., Flushing, N. Y.
Gas Arc Supply, Philadelphia, Pa.
General Scientific Equipment Co., Philadelphia, Pa.
Harris Calorific Co., Cleveland, Ohio.
Lee Co., K. O., Aberdeen, S. D. (Welding)
Lincoln Electric Co., Cleveland, O.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Mid-States Welder Mfg. Co., Chicago, Ill. (Brazing & welding; ac & dc)
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis, Mo.

National Cylinder Gas Co., Chicago, Ill.
Reiner & Campbell Co., Inc., Newark, N. J.
Smith Welding Equipment Corp., Minneapolis, Minn.
Trindl Products, Ltd., Chicago, Ill.
Weldit, Inc., Detroit, Mich.

TORCHES, SOLDERING

Acet-A-Tips Co., Chicago, Ill.
Air Reduction Sales Co., New York, N. Y.
Bastian-Blessing Co., Chicago, Ill.
Bernz Co., Otto, Rochester, N. Y.
Clayton & Lambert Mfg. Co., Louisville, Ky.
Dockson Corp., Detroit, Mich.
Everhot Mfg. Co., Maywood, Ill.
Fusion Engineering, Cleveland, Ohio.
General Scientific Equipment Co., Philadelphia, Pa.
Goss Gas Inc., Glenshaw, Pa.
Harris Calorific Co., Cleveland, Ohio.
Insto-Gas Corp., Detroit, Mich.
Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Lenk Mfg. Co., Boston, Mass.
Linde Air Products Co., New York, N. Y.
Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
Marquette Mfg. Co., Inc., Minneapolis, Minn.
Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Modern Engineering Co., St. Louis, Mo.
Mutual Liquid Gas & Equipment Co., Inglewood, Calif.
National Cylinder Gas Co., Chicago, Ill.
Prepo Corp., Edgerton, Wis.
Ransome Co., Emeryville, Calif.
Reiner & Campbell Co., Inc., Newark, N. J.
Sanders, J. A., Fulton, N. Y.
Sight Feed Generator Co., West Alexandria, Ohio.
Smith Welding Equipment Corp., Minneapolis, Minn.
Tinit Mfg. Co., Inc., Denver, Colo.
Torit Mfg., Co., St. Paul, Minn.
Turner Brass Works, Sycamore, Ill.
Unique Mfg. Co., Inc., Chicago, Ill. (Gasoline & Kerosene)
Velocity-Power Tool Co., Pittsburgh, Pa.
Weldit, Inc., Detroit, Mich.

TOWERS, COOLING, ATMOSPHERIC

Binks Mfg. Co., Chicago, Ill.
Dover Mfg. Co., Independence, Mo.
Fluor Corp., Ltd., The, Los Angeles, Calif.
Harry Cooling Towers, Inc., New York, N. Y.
Lilie-Hoffman Cooling Towers, Inc., St. Louis, Mo.
Marley Co., The, Inc., Kansas City, Mo.
New England Cooling Tower Co., Boston, Mass.
Pennsylvania Engineering Corp., New Castle, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N .Y.
Pritchard & Co., J. F., Equipment Div., Kansas City, Mo.
Santa Fe Tank & Tower Co., Los Angeles, Calif.
Stewart Ice Machine Co., Pomona, Calif.
United Cooling Tower Co., Kansas City, Mo.
Water Cooling Corp., New York, N. Y.
Water Cooling Equipment Corp., St. Louis, Mo.
Water Cooling Tower Co., Chicago, Ill.
Wheeler Mfg. Co., C. H., Philadelphia, Pa.

TOWERS, COOLING, MECHANICAL DRAFT

Acme Equipment Co., of Oklahoma, Inc., Muskogee, Okla.
Acme Industries Inc., Jackson, Mich.
Ayres, Inc., Houston, Tex.
Baltimore Aircoil Co., Inc., Baltimore, Md.
Beck Mfg. Co., New Albany, Ind.
Binks, Mfg. Co., Chicago, Ill.
Buensod-Stacey, Inc., New York, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Crowell & Dunn, Inc., New York, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Dover Mfg. Co., Independence, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Fluor Corp., Ltd., The, Los Angeles, Calif.
Goodfellow Co., Inc., E. D., Memphis, Tenn.
Governair Corp., Oklahoma City, Okla.
Halstead & Mitchell, Pittsburgh, Pa.
Harry Cooling Towers, Inc., New York, N. Y.
Havens Structural Steel Co., Kansas City, Mo.
Kennard Corp., St. Louis, Mo.
Kramer-Trenton Co., Trenton, N. J.
Lilie-Hoffman Cooling Towers, Inc., St. Louis, Mo.
Marley Co., The, Kansas City, Mo.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
New England Cooling Tower Co., Boston, Mass.
Pennsylvania Engineering Corp., New Castle, Pa.
Phillips Cooling Tower Co., Inc., Brooklyn, N .Y.
Pritchard & Co., J. F., Equipment Div., Kansas City, Mo.
Refrigeration Economics Co., Inc., Canton, Ohio.
Refrigeration Engineering, Inc., Los Angeles, Calif.
Santa Fe Tank & Tower Co., Los Angeles, Calif.
Tenney Engineering, Inc., Newark, N. J.
Union Asbestos & Rubber Co., Chicago, Ill.
United Conditioning Corp., Croton Falls, N. Y.
United Cooling Tower Co., Kansas City, Mo.
Vogt Machine Co., Henry, Louisville, Ky. (packaged unit with condenser, pump, etc.)
Water Cooling Corp., New York, N. Y.
Water Cooling Equipment Corp., St. Louis, Mo.
Water Cooling Tower Co., Chicago, Ill.
Wheeler Mfg. Co., C. H., Philadelphia, Pa.
Worthington Corp., Harrison, N. J.

TRANSFORMERS, IGNITION

Acme Electric Corp., Cuba, N. Y.
Dongan Electric Mfg. Co., Detroit, Mich.
Dormeyer Industries, Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Harvey, Inc., Sid., Valley Stream, N. Y.
HomEase Products Div., Inc., Bogue Electric Mfg. Co., Paterson, N. J.
Jefferson Electric Co., Bellwood, Ill.
Magnex Corp., Jamaica, N. Y.
Nu-Way Corp., The, Rock Island, Ill.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Union Spring & Mfg. Co., Jersey City, N. J.
Webster Electric Co., Racine, Wis.

TRANSFORMERS, LOW VOLTAGE

Barber-Colman Co., Rockford, Ill.
Central Transformer Corp., Pine Bluff, Ark.
Crown Controls Co., Inc., New Bremen, Ohio.
Dongan Electric Mfg. Co., Detroit, Mich.
Dormeyer Industries, Chicago, Ill.
Eisler Engineering Co., Newark, N. J.
General Controls Co., Glendale, Calif.
General Electric Co., Schenectady, N. Y.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Jefferson Electric Co., Bellwood, Ill.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
NuTone, Inc., Cincinnati, O.
Taylor-Winfield Corp., Warren, Ohio.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Union Spring & Mfg. Co., Jersey City, N. J.
Wagner Electric Corp., St. Louis, Mo.
Westinghouse Electric Corp., Pittsburgh, Pa.

TRANSMISSIONS, VARIABLE SPEED

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Dodge Mfg. Corp., Mishawaka, Ind.
Lewellen Mfg. Co., Columbus, Ind.
Link-Belt Co., Chicago, Ill.
Lovejoy Flexible Coupling Co., Chicago, Ill.
Reliance Electric & Engineering Co., Cleveland, Ohio.
Sterling Electric Motors, Inc., Los Angeles, Calif.
U. S. Electrical Motors, Inc., Los Angeles, Calif.

TRIM, ORNAMENTAL

See Moulding and Trim, Ornamental

TRUCK BODIES

See Bodies and Accessories, Truck

TRUCKS, MOTOR

Chevrolet Motor Div. General Motors Corp., Detroit, Mich.
Dodge Brothers, Detroit, Mich.
Ford Motor Co., Dearborn, Mich.
GMC Truck & Coach Div., General Motors Corp., Pontiac, Mich.
International Harvester Co., Truck Div., Chicago, Ill.

TRUCKS, WAREHOUSE

Big Joe Mfg. Co., Chicago, Ill.
Elwell-Parker Electric Co., Cleveland, O.
Marion Metal Products, Marion, O.
Yale & Towne Mfg. Co., The, Philadelphia, Pa.

TUBING, ALUMINUM

Aluminum Co. of America, Pittsburgh, Pa.
American Brass Co., New York, N. Y.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.

Harvey Machine Co., Inc., Torrence, Calif.
Kaiser Aluminum & Chemical Corp., Oakland, Calif.
Lewin-Mathes, Lewis Metals Div., St. Louis, Mo.
Quaker State Metals Co., Lancaster, Pa.
Penn Brass & Copper Co., Erie, Pa.
Revere Copper & Brass Inc., New York, N. Y.
Reynolds Metals Co., Louisville, Ky.
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa.
United Wire & Supply Corp., Providence, R. I.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.

TUBING, COPPER

American Brass Co., New York, N. Y.
Bridgeport Brass Co., Bridgeport, Conn.
Chase Brass & Copper Co., Inc., Waterbury, Conn.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y.
Hussey & Co., C. G., Pittsburgh, Pa.
Keasico Tube Co., Mt. Kisco, N. Y.
Lewin-Mathes Co., Lewin Metals Div., St. Louis, Mo.
Mueller Brass Co., Port Huron, Mich.
Penn Brass & Copper Co., Erie, Pa.
Phelps Dodge Copper Products Corp., British American Tube Div., New York, N. Y.
Revere Copper & Brass Inc., New York, N. Y.
United Wire & Supply Corp., Providence, R. I.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.

TUBING, NICKEL AND NICKEL ALLOY

Bundy Tubing Co., Detroit, Mich.
Downs-Smith Brass & Copper Co., Inc., New York, N. Y.
International Nickel Co., Inc., New York, N. Y.
Revere Copper & Brass Inc., New York, N. Y.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.

TUBING, PLASTIC

Acadia Synthetic Products Div., Western Felt Works, Chicago, Ill.
American Agile Corp., Bedford, O.
American Hard Rubber Co., New York, N. Y.
Carlon Products, Cleveland, Ohio.
Commercial Plastics Co., Chicago, Ill.
Continental-Diamond Fibre Co., Newark, Del.
General Ceramics & Steatite Corp., Keasbey, N. J.
General Electric Co., Chemical Div., Pittsfield, Mass.
Haveg Corp., Newark, Del.
Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., Irvington, N. J.
Mills Corp., Elmer E., Chicago, Ill.
Pacific States Felt & Mfg. Co., Inc., San Francisco, Calif.
Panelyte Div., St. Regis Paper Co., New York, N. Y.
Republic Steel Corp., Cleveland, O.
Sandee Mfg Co., Chicago, Ill.
Saran Lined Pipe Co., Ferndale, Mich.
Van Dorn Iron Works, Cleveland, O.
Yardley Plastics Co., Columbus, O.

TUBING, STEEL

Armco Steel Corp., Middletown, Ohio.
Bethlehem Steel Co., Bethlehem, Pa.
Bundy Tubing Co., Detroit, Mich.
Crucible Steel Co., Pittsburgh, Pa.
Dieckmann Co., Ferdinand, Cincinnati, Ohio. (Galv. speaking tube)
Jones & Laughlin Steel Corp., Pittsburgh, Pa.
Laclede Steel Co., St. Louis, Mo.
Michigan Steel Tube Products Co., Detroit, Mich.
National Tube Div., U. S. Steel Corp., Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Revere Copper & Brass, Inc., New York, N. Y. (Welded)
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.
Wolverine Tube Div., Calumet & Hecla, Inc., Detroit, Mich.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

TUBING, STEEL, STAINLESS

Allegheny-Ludlum Steel Corp., Pittsburgh, Pa.
Crucible Steel Co., Pittsburgh, Pa.
Michigan Steel Tube Products Co., Detroit, Mich.
National Tube Div., U. S. Steel Corp., Pittsburgh, Pa.
Republic Steel Corp., Cleveland, Ohio.
Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Timken Roller Bearing Co., Canton, Ohio.

TURNING VANES

See Vanes, Duct Turning

UNIT HEATERS

See Heaters, Unit

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY, CONSISTING OF BLOWER, FILTER AND COOLING COIL

With Connection to Remote Condensing Unit or Cold Water Supply for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
American Furnace Co., St. Louis, Mo.
Bakeraire Corp., South Windham, Maine.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Coleman Co., Inc., Wichita, Kans.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Kennard Corp., St. Louis, Mo.
Kramer Trenton Co., Trenton, N. J.
Larkin Coils, Inc., Atlanta, Ga.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Peerless Furnace & Foundry Co., Indianapolis, Ind.
Refrigeration Economics Co., Inc., Canton, Ohio.
Trane Co., LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.
York-Shipley, Inc., York, Pa.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY, CONSISTING OF CONDENSING UNIT, BLOWER, FILTER, AND COOLING COIL

For Connection to Existing Warm Air System

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
American Furnace Co., St. Louis, Mo.
Armstrong Furnace Co., Columbus, O.
Automatic Firing Corp., St. Louis, Mo.
Bakeraire Corp., South Windham, Maine.
Bal-Air, Inc., Nashville, Tenn.
Barkow Mfg. Co., Inc., Aug. G., Milwaukee, Wis.
Besser Metal Products Corp., Charlotte, N. C.
Bishop & Babcock Mfg. Co., Cleveland, O.
Brunner Mfg. Co., Utica, N. Y.
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, O.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Coleman Co., Inc., Wichita, Kans.
Conco Engineering Works, Heating Div., Mendota, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Deering Air Conditioning Co., Cincinnati, O.
Farquhar Furnace Co., Wilmington, O.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Frigidaire Div., G. M. Corp., Dayton, Ohio
Front Rank Furnace Co., St. Louis, Mo.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Governair Corp., Oklahoma City, Okla.
Hupp Corp., Globe Stamping Div., Cleveland, O.
Lennox Furnace Co., Marshalltown, Iowa
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Majestic Co., Inc., Huntington, Ind.
Morrison Steel Products, Inc., Buffalo, N. Y.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Muncie Gear Works, Inc., Muncie, Ind.
Niagara Blower Co., New York, N. Y.
Olsen Mfg. Co., The C. A., Elyria, O.
Patten Co., J. V., Sycamore, Ill.
Peerless Furnace & Foundry Co., Indianapolis, Ind.
Perfection Stove Co., Cleveland, O.
Quiet-Air Mfg. Div., Abco Refrigeration Supply Co., New York, N. Y.
Refrigeration Economics, Inc., Canton, O.
Round Oak Co., Inc., Dowagiac, Mich.
Schnacke, Inc., Evansville, Ind.
Sterling Air Conditioning Corp., Charlotte, N. C.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.

Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Surface Combustion Corp., Toledo, O.
Thatcher Furnace Co., Garwood, N. J.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Waterman-Waterbury Co., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Williamson Heater Co., Cincinnati, O.
York Corp., York, Pa.
York-Shipley, Inc., York, Pa.
Young Radiator Co., Racine, Wis.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER ONLY, CONSISTING OF COOLING COIL, FILTER AND CONDENSING UNIT

For Connection to Existing Warm Air Heating System

Air Conditioning Engineering Co., Cambridge, Mass.
American Furnace Co., St. Louis, Mo.
Bal-Air, Inc., Nashville, Tenn.
Barkow Mfg. Co., Inc., Aug. G., Milwaukee, Wis.
Besser Metal Products Corp., Charlotte, N. C.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N.Y.
Columbia Specialty Co., Inc., Chevy Chase, Md.
Conco Engineering Works, Heating Div., Mendota, Ill.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Deering Air Conditioning Co., Cincinnati, O.
Delta Heating Corp., Trenton, N. J.
Forest City Foundries Co., Niagara Furnace Div., Cleveland, O.
Front Rank Furnace Co., St. Louis, Mo
General Electric Co., Air Conditioning Div., Bloomfield, N.J.
Henry Furnace Co., Medina, O.
Hupp Corp., Globe Stamping Div., Cleveland, O.
Iron Fireman Mfg. Co., Cleveland, O.
Lennox Furnace Co., Marshalltown, Ia.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Melchior, Armstrong, Dessau Co., Ridgefield, N. J.
Mueller Furnace Co., L. J., Milwaukee, Wis
Muncie Gear Works, Inc., Muncie, Ind.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Olsen Mfg. Co., The C. A., Elyria, O.
Refrigeration Economics, Inc., Canton, O.
Round Oak Co., Inc., Dowagiac, Mich.
Sterling Air Conditioning Corp., Charlotte, N. C.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Trane Co., The, La Crosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N.Y.
Union Asbestos & Rubber Co., Chicago, Ill.
U. S. Air Conditioning Corp., Minneapolis, Minn.
U. S. Radiator Corp., Detroit, Mich.
Waterman-Waterbury Co., Minneapolis, Minn.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Worthington Corp., Harrison, N.J.
York Corp., York, Pa.
York-Shipley, Inc., York, Pa.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER-WINTER

Consisting of Blower, Filter, Humidifier, Direct Fired Warm Air Furnace, Cooling Coil and Condensing Unit for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass. (Gas or oil)
Airtemp Div., Chrysler Corp., Dayton, O. (Gas)
American Furnace Co., St. Louis, Mo. (Gas)
Besser Metal Products Corp., Charlotte, N. C. (Oil)
Bryant Heater Div., Affiliated Gas Equipment, Inc., Cleveland, O. (Gas or oil)
Coleman Co., Inc., Wichita, Kans.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Delco Appliance Div., General Motors Corp., Rochester, N. Y. (Gas or oil)
Delta Heating Corp., Trenton, N. J. (Gas or oil)
Dualtron Co., Pittsburgh, Pa. (Gas or oil)
Farquahar Furnace Co., Wilmington, O. (Gas or oil)
Frigidaire Div., General Motors Corp., Dayton, O. (Gas or oil)
Front Rank Furnace Co., Div. Liberty Foundry Co., St. Louis, Mo. (Gas or oil)
General Electric Co., Air Conditioning Div., Bloomfield, N. J. (Gas or oil)
Henry Furnace Co., Medina, O. (Gas or oil)
Lennox Furnace Co., Marshalltown, Ia. (Gas)
Majestic Co., Inc., Huntington, Ind.
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas or oil)
Myers & Bro. Co., F. E., Ashland, O. (Gas)
Niagara Blower Co., New York, N. Y.
Olsen Mfg. Co., The C. A., Elyria, O.
Paragon Oil Burner Corp., Brooklyn, N. Y. (Oil)
Peerless Furnace & Foundry Co., Indianapolis, Ind.
Ralph Mfg. Co., Inc., Wadsworth, O.
Round Oak Co., Inc., Dowagiac, Mich.
Sterling Air Conditioning Corp., Charlotte, N. C. (Gas or oil)
Skinner Heating & Ventilating Co., Div. St. Louis Blow Pipe & Heater Co., Inc., St. Louis, Mo.
Surface Combustion Corp., Toledo, O.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y. (Gas or oil)
Waterman-Waterbury Co., Minneapolis, Minn. (Gas or oil)
York Corp., York, Pa.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER-WINTER, FOR REMOTE CONDENSING UNIT OR COLD WATER SUPPLY

Consisting of Blower, Filter, Humidifier, Direct Fired Warm Air Furnace and Cooling Coil for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass. (Gas or oil)
Airtemp Div., Chrysler Corp., Dayton, O. (Oil)
Besser Metal Products Corp., Charlotte, N. C. (Oil)
Carrier Corp., Syracuse, N. Y. (Gas or oil)
Coleman Co., Inc., Wichita, Kans.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Meyer Furnace Co., Peoria, Ill. (Gas or oil)
Mueller Furnace Co., L. J., Milwaukee, Wis. (Gas or oil)
Syncromatic Corp., Watertown, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y. (Oil or gas)
York Corp., York, Pa.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER-WINTER, WITH HEAT PUMP

Consisting of Blower, Filter, Humidifier, Reverse Refrigeration Cycle, Heating Coil and Cooling Coil for Duct Distribution of Air

Acme Industries, Inc., Jackson, Mich.
Air Cooler Corp., Electri-Aire Div., St. Louis, Mo.
American Coils Co., Inc., Newark, N. J.
General Electric Co., Air Cond. Div., Bloomfield, N. J.
Muncie Gear Works, Inc., Muncie, Ind.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Westinghouse Elec. Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, SUMMER-WINTER, WITH STEAM GENERATOR

Consisting of Blower, Filter, Humidifier, Heating Coil and Cooling Coil for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass. (Gas or oil)
American Coils Co., Inc., Newark, N. J.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Servel, Inc., Evansville, Ind. (Gas)
Viking Mfg. Corp., Cleveland, O. (Gas or oil)
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, WINTER ONLY, CONSISTING OF FURNACE, BLOWER, FILTER AND HUMIDIFIER

See furnaces, forced warm air

UNITS, AIR CONDITIONING, CENTRAL PLANT, RESIDENTIAL, WINTER ONLY, FOR SPLIT SYSTEM

Consisting of Blower, Filter, Humidifier, Heating Coil and Connection to Remote Steam or Hot Water Boiler for Duct Distribution of Air

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Buffalo Forge Co., Buffalo, N. Y.

Bush Mfg. Co., West Hartford, Conn.
Clarage Fan Co., Kalamazoo, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Johnson Co., S. T., Oakland, Calif., and Philadelphia, Pa.
Kennard Corp., St. Louis, Mo.
Marlo Coil Co., St. Louis, Mo.
Refrigeration Economics Co., Inc., Canton, Ohio.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

UNITS, AIR CONDITIONING, CENTRAL SYSTEM, EVAPORATIVE TYPE

For Duct Distribution of Air, Consisting of Blower, Filter, Pump, and Sprays or Mats (for cooling by evaporation)

Air & Refrigeration Corp., New York, N. Y.
Alton Mfg. Co., Dallas, Tex.
Barwick Mfg. Corp., Wichita, Kans.
Essick Mfg. Co., Los Angeles, Calif.
Fyne Aire Mfg. Co., Dallas, Tex.
Heating Assurance, Inc., Spokane, Wash.
International Metal Products Co., Phoenix, Ariz.
National Engineering & Mfg. Co., Sedalia, Mo.

UNITS, AIR CONDITIONING, ROOM TYPE, EVAPORATIVE

Consisting of Blower, Filter, Pump, and Sprays or Mats (for cooling by evaporation)

Air Cooling Engineering Co., Evanston, Ill.
Airfan Engineering Co., Los Angeles, Calif.
Alton Mfg. Co., Dallas, Texas.
American Cooling Tower Co., Kansas City, Mo.
Arizona Maintenance Co., Tucson, Ariz.
Auburn Foundry, Inc., Stoker Div., Auburn, Ind.
Barwick Mfg. Corp., Wichita, Kans.
Belmetals Mfg. Co., Belmont, Calif.
Beyer Metal Products Co., Rosamond, Calif.
Campbell, E. K., Kansas City, Mo.
Central States Mfg. Co., Inc., Arkansas City, Kans.
Climax Machinery Co., Indianapolis, Ind.
Comfort Products Corp., Dallas, Texas.
Davison, Inc., Frank D., Los Angeles, Calif.
Dearborn Stove Co., Dallas, Texas.
Essick Mfg. Co., Los Angeles, Calif.
Farr Co., Los Angeles, Calif.
Fyne Aire Mfg. Co., Dallas, Tex.
Great National Air Conditioning Corp., Oklahoma City, Okla.
Heating Assurance, Inc., Spokane, Wash.
International Metal Products Co., Phoenix, Ariz.
Lennox Furnace Co., Marshalltown, Ia.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Montag Stove & Furnace Works, Portland, Ore.
Morey, Dan, Los Angeles, Calif.
Mountain States Equipment Co., Denver, Colo.
National Engineering & Mfg. Co., Sedalia, Mo.
Palmer Mfg. Corp., Phoenix, Ariz.
Pernot Corp., Norwalk, Calif.
Polaire Cooler Co., Inc., El Mirage, Ariz.
Reynolds Mfg. Co., Springfield, Mo.
Southern Air Conditioning Mfg. Co., Fort Worth, Texas.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif.
Thompson Mfg. Co., A. F., Huntington, W. Va.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., The, La Crosse, Wis.
United Electric Service Co., Wichita Falls, Tex.
Utility Appliance Corp., Los Angeles, Calif.
Wright's Air Conditioning Co., Phoenix, Ariz.

UNITS, AIR CONDITIONING, ROOM TYPE, FLOOR CABINET, SUMMER ONLY, UNDER 3 HP

Consisting of Blower, Filter, Cooling Coil and Condensing Unit

Bal-Air, Inc., Nashville, Tenn.
Baltimore Porcelain Steel Corp., Baltimore, Md.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Hotpoint, Inc., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Quiet Heet Mfg. Corp., Newark, N. J.
Remington Air Conditioning Div., Remington Corp., Auburn, N.Y.
Round Oak Co., Inc., Dowagiac, Mich.
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.

UNITS, AIR CONDITIONING, ROOM TYPE, FLOOR CABINET, SUMMER ONLY, UNDER 3 HP, FOR REMOTE CONDENSING UNIT OR COLD WATER SUPPLY

Consisting of Blower, Filter and Cooling Coil

Bal-Air, Inc., Nashville, Tenn.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Carrier Corp., Syracuse, N. Y.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Refrigeration Economics Co., Inc., Canton, Ohio.
Trane Co., The, La Crosse, Wis.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N.J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

UNITS, AIR CONDITIONING, ROOM TYPE, FLOOR CABINET, SUMMER-WINTER, UNDER 3 HP

Consisting of Blower, Filter, Humidifier, and Heating and Cooling Coils for Connection to Steam or Hot Water Supply and Remote Condensing Unit or Cold Water Supply

Air Conditioning Engineering Co., Cambridge, Mass.
Bal-Air, Inc., Nashville, Tenn.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
International Mfg. Co., Oklahoma City, Okla.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Marlo Coil Co., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Refrigeration Economics Co., Inc., Canton, Ohio.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
United States Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.
Young Radiator Co., Racine, Wis.

UNITS, AIR CONDITIONING, ROOM TYPE, FLOOR CABINET, WINTER ONLY

Consisting of Blower, Filter, Humidifier, and Heating Coil for Connection to Remote Boiler

Airtemp Div., Chrysler Corp., Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Bush Mfg. Co., West Hartford, Conn.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.
Drayer-Hanson, Inc., Los Angeles, Calif.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kennard Corp., St. Louis, Mo.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Worthington Corp., Harrison, N. J.
Young Radiator Co., Racine, Wis.

UNITS, AIR CONDITIONING, ROOM TYPE, WINDOW, SUMMER ONLY

Consisting of Blower, Filter, Cooling Coil and Condensing Unit

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio
Amana Refrigeration, Inc., Amana, Ia.
Bakeraire Corp., South Windham, Maine
Bard Mfg. Co., Bryan, O.
Bryant Heating Div., Affil. Gas Equipment, Inc., Cleveland, Ohio
Carrier Corp., Syracuse, N. Y.
Cauhorn Distributing Co., Detroit, Mich.
Coolerator Co., Duluth, Minn.
Cool-Ette, Inc., Detroit, Mich.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo.

Dayton Pump & Mfg. Co., Dayton, O.
Deepfreeze Appliance Div., Motor Products Corp., North Chicago, Ill.
Deering Air Conditioning Co., Cincinnati, Ohio
Emerson Electric Mfg. Co., St. Louis, Mo.
Emerson Radio and Phonograph Corp., New York, N. Y.
Fedders-Quigan Corp., Buffalo, N. Y.
Fresh'nd-Aire Co., Chicago, Ill.
Friedrich Refrigerators, Inc., San Antonio, Tex.
Frigid, Inc., Brooklyn, N. Y.
Frigidaire Div., General Motors Corp., Dayton, Ohio
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Gibson Refrigerator Co., Greenville, Mich.
Hotpoint Co., Chicago, Ill.
Hunter Fan & Ventilating Co., Memphis, Tenn.
Jordon Refrigerator Co., Inc., Philadelphia, Pa.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Kelvinator Div., Nash-Kelvinator Corp., Detroit, Mich.
Larkin Coils, Inc., Atlanta, Ga.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Magic Chef, Inc., St. Louis, Mo.
McQuay, Inc., Minneapolis, Minn.
Mitchell Mfg. Co., Chicago, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Norge Heat Div., Borg-Warner Corp., Kalamazoo, Mich.
Perfection Stove Co., Cleveland, O.
Quiet-Heet Mfg. Corp., Newark, N. J.
Remington Air Cond. Div., Remington Corp., Auburn, N. Y.
Rheem Mfg. Co., New York, N. Y.
Robbins & Myers, Inc., Springfield, O.
Servel, Inc., Evansville, Ind.
Sterling Air Conditioning Corp., Charlotte, N. C.
Sub-Zero Freezer Co., Inc., Madison, Wis.
Sutton Corp., O. A., Wichita, Kans.
Tele King Corp., New York, N. Y.
Typhoon Air Conditioning Co., Inc., Brooklyn 15, N. Y.
Tywel Mfg. Corp., Brooklyn, N. Y.
United Conditioning Corp., Croton Falls, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Victor Products Corp., Hagerstown, Md.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Westinghouse Electric Corp., Electric Appliance Div., Springfield, Mass.
Worthington Corp., Harrison, N. J.
York Corp., York, Pa.

UNITS, AIR CONDITIONING, ROOM TYPE, WINDOW, SUMMER-WINTER

Consisting of Blower, Filter, Cooling Coil, Condensing Unit and Heating Unit

Amana Refrigeration, Inc., Amana, Ia.
Fresh'nd-Aire Co., Chicago, Ill.
Frigidaire Div., General Motors Corp., Dayton, O.
Gibson Refrigerator Co., Greenville, Mich.
Hotpoint Co., Chicago, Ill.
Mitchell Mfg. Co., Chicago, Ill.
Perfection Stove Co., Cleveland, O.
Quiet-Heet Mfg. Corp., Newark, N. J.
Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.
Tele King Corp., New York, N. Y.
U. S. Air Conditioning Corp., Minneapolis, Minn.

UNITS, AIR CONDITIONING, STORE TYPE, FLOOR CABINET, SUMMER ONLY, 3 HP AND OVER

Consisting of Blower, Filter, Cooling Coil and Condensing Unit, with Air Discharge Approximately 6 ft Above Floor

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, Ohio.
Automatic Firing Corp., St. Louis, Mo.
Bakeraire Corp., South Windham, Maine
Bal-Air, Inc., Nashville, Tenn.
Bard Mfg. Co., Bryan, Ohio.
Brunner Mfg. Co., Utica, N. Y.
Carrier Corp., Syracuse, N. Y.
Coleman Co., Inc., Wichita, Kans.
Curtis Refrigerating Machine Div., Curtis Mfg. Co., St. Louis, Mo
Frick Co., Waynesboro, Pa.
Frigidaire Div., General Motors Corp., Dayton, Ohio.
General Electric Co., Air Conditioning Div., Bloomfield, N. J.
Governair Corp., Oklahoma City, Okla.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Hupp Corp., Globe Stamping Div., Cleveland, O.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Melchior, Armstrong, Dessau Co., Ridgefield, N. J.
Meyer Furnace Co., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Muncie Gear Works, Inc., Muncie, Ind.
Nat Corp., Kansas City, Mo.
Olsen Mfg. Co., The C. A., Elyria, O.
Ralph Mfg. Co., Inc, Wadsworth, O.
Rinehart, Inc., Richmond, Ind.
Round Oak Co., Inc., Dowagiac, Mich.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Surface Combustion Corp., Toledo, O.
Thatcher Furnace Co., Garwood, N. J.
Trane Co., The, LaCrosse, Wis.
Typhoon Air Conditioning Co., Inc., Brooklyn, N. Y.
Union Asbestos & Rubber Co., Chicago, Ill.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Viking Mfg. Corp., Cleveland, Ohio.
Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Worthington Corp., Harrison, N. J.
York-Shipley, Inc., York, Pa.

UNITS, AIR CONDITIONING, STORE TYPE, SUSPENDED CABINET, SUMMER ONLY, 3 HP AND OVER

Consisting of Blower, Filter, Cooling Coil and Condensing Unit

Air Conditioning Engineering Co., Cambridge, Mass.
Airtemp Div., Chrysler Corp., Dayton, O.
Bal-Air, Inc., Nashville, Tenn.
Besser Metal Products Corp., Charlotte, N. C.
Round Oak Co., Inc., Dowagiac, Mich.
U. S. Radiator Corp., Detroit, Mich.

VACUUM CLEANERS FOR FURNACES

See Cleaners, Vacuum, Furnace

VALVES, GAS PRESSURE REGULATING

Black, Sivalls & Bryson, Inc., Kansas City, Mo.
Bristol Co., Waterbury, Conn.
Davis Regulator Co., Chicago, Ill.
Defender Instrument & Regulator Co., St. Louis, Mo. (Chromometer)
Dockson Corp., Detroit, Mich.
Eclipse Fuel Engineering Co., Rockford, Ill.
Fisher Governor Co., Marshalltown, Iowa.
Foster Engineering Co., Union, N. J.
Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
General Controls Co., Glendale, Calif.
Harris Calorific Co., Cleveland, Ohio.
Hubbell Corp., Mundelein, Ill.
Maxitrol Co., Detroit, Mich.
Mercoid Corp., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Penn Controls, Inc., Goshen, Ind.
Reliance Regulator Div. American Meter Co., Inc., Alhambra, Calif.
Reynolds Gas Regulator Co., Anderson, Ind.
Standard Remote Control Valve Co., South Pasadena, Calif.
Thermac Co., Los Angeles, Calif.
Weldit, Inc., Detroit, Mich.

VALVES, HUMIDIFIER, WATER LEVEL

Beckett & Co., Thomas, Dallas, Texas.
Fisher Governor Co., Marshalltown, Iowa.
General Controls Co., Glendale, Calif.
Imperial Brass Mfg. Co., Chicago, Ill. (Saddle Valve)
Lincoln Brass Works, Detroit, Mich.
McDonnell & Miller, Inc., Chicago, Ill.
Maid-O'-Mist, Inc., Chicago, Ill.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Morey, Dan, Los Angeles, Calif.
Robert Mfg. Co., Los Angeles, Calif.
Skuttle Mfg. Co., Milford, Mich.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.

VALVES, REFRIGERATION, EXPANSION, THERMOSTATIC

A-P Controls Corp., Milwaukee, Wis.
Alco Valve Co., St. Louis, Mo.
Cash Co., A. W., Decatur, Ill.

Frigidaire Div., General Motors Corp., Dayton, Ohio.
General Controls Co., Glendale, Calif.
Mayson Mfg. Co., Detroit, Mich.
Sporlan Valve Co., St. Louis, Mo.
Tenney Engineering, Inc., Newark, N. J.
Vilter Mfg. Co., Milwaukee, Wis.
X L Refrigerating Co., Chicago, Ill.

VALVES, REFRIGERATION, WATER REGULATING, PRESSURE OR TEMPERATURE ACTUATED

A-P Controls Corp., Milwaukee, Wis.
Aminco Refrigeration Products Co., Detroit, Mich.
Art Valve Co., Chicago, Ill.
Bailey Co., Chas. M., San Francisco, Calif.
Foster Engineering Co., Union, N. J.
General Controls Co., Glendale, Calif.
Klipfel Mfg. Co., Hamilton, Ohio.
McDonnell & Miller, Inc., Chicago, Ill.
Mayson Mfg. Co., Detroit, Mich.
Mueller Brass Co., Port Huron, Mich.
Penn Controls, Inc., Goshen, Ind.
Perfection Refrigeration Parts Co., Harvey, Ill.
Sarco Co., Inc., New York, N. Y.
Shank Co., Cyrus, Chicago, Ill.

VALVES, SADDLE

See Fittings, Humidifier, Water Line

VALVES, SOLENOID

A-P Controls Corp., Milwaukee, Wis.
Alco Valve Co., St. Louis, Mo.
Atkomatic Valve Co., Indianapolis, Ind.
Automatic Switch Co., Orange, N. J.
Barber-Colman Co., Rockford, Ill.
Barksdale Valves, Los Angeles, Calif.
Bellows Co., Akron, Ohio.
Cooper Co., Clark, Palmyra, N. J.
Cutler-Hammer, Inc., Milwaukee, Wis.
Davis Regulator Co., Chicago, Ill.
Detroit Controls Corp., Detroit, Mich.
Erickson Specialty Co., Cohoes, N. Y.
Frick Co., Waynesboro, Pa.
General Controls Co., Glendale, Calif.
Grove Regulator Co., Oakland, Calif.
Hays Mfg. Co., Erie, Pa.
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hubbell Corp., Mundelein, Ill.
Hunt & Son, Inc., C. B., Salem, Ohio.
Johnson Corp., The, Three Rivers, Mich.
Keckley Co., O. C., Chicago, Ill.
Lammert & Mann Co., Chicago, Ill.
Locke Regulator Co., Salem, Mass.
McDonnell & Miller, Inc., Chicago, Ill.
McQuay-Norris Mfg. Co., St. Louis, Mo.
Mercoid Corp., Chicago, Ill.
Marsh Corp., Jas. P., Skokie, Ill.
Milwaukee Gas Specialty Co., Milwaukee, Wis.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Paul Valve Corp., New York, N. Y.
Penn Controls, Inc., Goshen, Ind.
Perfex Corp., Milwaukee, Wis.
Pfening Co., Fred D., Columbus, Ohio.
R-S Products Corp., Philadelphia, Pa.
Ruggles-Klingemann Mfg. Co., Salem, Mass.
Sarco Co., Inc., New York, N. Y.
Sarcotherm Controls, Inc., New York, N. Y.
Sciaky Bros., Inc., Chicago, Ill.
Skinner Electric Valve Div., Skinner Chuck Co., New Britain, Conn.
Sporlan Valve Co., St. Louis, Mo.
Square D Co., Detroit, Mich.
Square D Co., Industrial Controller Div., Milwaukee, Wis.
Superior Controls Co., Inc., Los Angeles, Calif.
Supreme Electric Products Corp., Rochester, N. Y.
Taylor-Winfield Corp., Warren, Ohio.
Vapor Heating Corp., Chicago, Ill.
White-Rodgers Electric Co., St. Louis, Mo.

VANES, DUCT TURNING

Air Devices, Inc., New York, N. Y.
Anemostat Corp. of America, New York, N. Y. (Equalizing deflectors)
Barber-Colman Co., Rockford, Ill.
Duro-Dyne Corp., Hempstead, L. I., N. Y.
Elgen Mfg. Corp., Long Island City, N. Y.
Register & Grille Mfg., Co., Inc., Brooklyn, N. Y.
Titus Mfg., Corp., Waterloo, Iowa.
Tuttle & Bailey, Inc., New Britain, Conn.

VENTILATOR AND FILTER UNITS, WINDOW

Airgard Mfg. Co., Chicago, Ill.
Berns Mfg. Co., Chicago, Ill.
Ilg Electric Ventilating Co., Chicago, Ill.
Kauffman Air Conditioning Corp., St. Louis, Mo.
Mellish & Murray Co., Chicago, Ill.
National Appliance Co., Detroit, Mich.
Reed Unit-Fans, Inc., New Orleans, La.
Somers, Inc., H. J. Detroit, Mich.
Trade-Winds Motorfans, Inc., Los Angeles, Calif.
Unified Air Conditioner Co., Duluth, Minn.
Utility Appliance Corp., Los Angeles, Calif.

VENTILATORS, ROOF, FAN

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Aerovent Fan Co., Piqua, Ohio.
Air Controls, Inc., Cleveland, Ohio.
Airjet Ventilator Co., Pasadena, Calif.
Aladdin Heating Corp., Oakland, Calif.
Allen Ventilator Div. Production Planning Co., Rochester, Mich.
American Blower Corp., Detroit, Mich.
American Coolair Corp., Jacksonville, Fla.
American-Larson Ventilating Co., Pittsburgh, Pa.
American Steel Band Co., Pittsburgh, Pa.
Ammerman Co., C. L., Minneapolis, Minn.
Arex Co., Chicago, Ill.
Bar-Brook Mfg. Co., Inc., Shreveport, La.
Bertram Co., Harvey P., Cincinnati, Ohio.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Bishop Co., R. H. Champaign, Ill.
Breidert Co., G. C., San Fernando, Calif.
Burt Mfg. Co., Akron, Ohio.
Century Fan & Ventilator Co., Stamford, Conn. (Turbine)
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Cook Co., Loren, Berea, Ohio.
Dana Fan & Blower Corp., Cincinnati, Ohio.
Davidson Hyduty Roof Fan Co., Newton, Mass.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Diehl Mfg. Co., Somerville, N. J.
Dual-Air Fan Corp., South Elgin, Ill.
Electrovent Fan & Mfg. Co., Chicago, Ill.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Fingles Co., Baltimore, Md.
Gehri Co., Tacoma, Wash.
General Blower Co., Morton Grove, Ill.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., Piqua Ohio.
Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Howes-Woods Co., Cambridge, Mass.
Ilg Electric Ventilating Co., Chicago, Ill.
International Engineering, Inc., Dayton, Ohio.
International Metal Products Co., Phoenix, Ariz.
Iona Ventilator Co., Inc., Philadelphia, Pa.
Iron Lung Ventilator Co., Cleveland, Ohio.
Jenn Air Products Co., Indianapolis, Ind.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
Joy Mfg. Co., Pittsburgh, Pa.
King Co., Owatonna, Minn.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lumm Co., A. H., Toledo, Ohio.
M & E Mfg. Co., Indianapolis, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Mountain States Equipment Co., Denver, Ohio.
Muckle Mfg. Co., Owatonna, Minn.
Newcomb-Detroit Co., Detroit, Mich.
New York Blower Co., Chicago, Ill.
Octagon Ventilator Co., Chicago, Ill.
Overly Mfg. Co., Greensburg, Pa.
Peerless Electric Co., Warren, Ohio.
Penn Ventilator Co., Philadelphia, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Riester & Thesmacher Co., Cleveland, Ohio.
Robbins & Myers, Inc., Springfield, Ohio.
Robertson Co., H. H., Pittsburgh, Pa. (Round-Rectangular)
Royal Ventilator Co., Philadelphia, Pa.

Somers, Inc., H. J., Detroit, Mich.
South Bend Air Products, Inc., South Bend, Ind.
Swartwout Co., Cleveland, Ohio.
Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Trane Co., The, LaCrosse, Wis.
Truflo Fan Co., Harmony, Pa.
Uno Ventilator Co., Malden, Mass. (Turbine)
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
Van Noorden Co., E., Boston, Mass.
Waverly Heating Supply Co., Boston, Mass.
Western Engineering & Mfg. Co., Venice, Calif.
Wind-Way Fan & Ventilator Co., New Orleans, La.
Wing Mfg. Co., L. J., Linden, N. J.

VENTILATORS, ROOF, GRAVITY

Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Air Control Products, Inc., Coopersville, Mich.
Air Devices, Inc., New York, N. Y.
Airjet Ventilator Co., Pasadena, Calif.
Allen Ventilator Div. Production Planning Co., Rochester, Mich. (Turbine)
American-Larson Ventilating Co., Pittsburgh, Pa.
American Steel Band Co., Pittsburgh, Pa.
Ammerman Co., C. L., Minneapolis, Minn.
Appleton Supply Co., Inc., Appleton, Wis.
Arex Co., Chicago, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Breidert Co., G. C., San Fernando, Calif.
Burt Mfg. Co., Akron, Ohio.
Century Fan & Ventilator Co., Stamford, Conn.
Clay Equipment Corp., Cedar Falls, Iowa.
Damp-Vent Co., Bettendorf, Ia.
Danzer Metal Works Co., Hagerstown, Md.
Donley Bros. Co., Cleveland, O.
Empire Ventilation Equipment Co., Long Island City, N. Y.
Excelsior Stove & Mfg. Co., Quincy, Ill.
Fingles Co., Baltimore, Md.
Gehri Co., Tacoma, Wash.
Greenheck Bros. Mfg. Co., Schofield, Wis.
Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Howes-Woods Co., Cambridge, Mass.
Inland Steel Products Co., Milwaukee, Wis.
International Metal Products Co., Phoenix, Ariz.
Iona Ventilator Co., Inc., Philadelphia, Pa.
Jordan & Co., Inc., Paul R., Indianapolis, Ind.
King Co., Owatonna, Minn.
Klauer Mfg. Co., Dubuque, Iowa.
LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Lee & Son Co., Thomas, Cincinnati, Ohio.
Leslie Welding Co., Inc., Chicago, Ill.
Los Angeles Sheet Metal Mfg. Co., Inc., Los Angeles, Calif.
Lumm Co., A. H., Toledo, Ohio.
M & E Mfg. Co., Indianapolis, Ind.
Martin Fan & Blower Co., Chicago, Ill.
Mellish & Murray Co., Chicago, Ill.
Moeschl-Edwards Corrugating Co., Inc., Cincinnati, Ohio.
National Metal Fabricators, Chicago, Ill.
Newcomb-Detroit Co., Detroit, Mich.
Octagon Ventilator Co., Chicago, Ill.
Overly Mfg. Co., Greensburg, Pa.
Penn Supply & Metal Corp., Philadelphia, Pa.
Penn Ventilator Co., Philadelphia, Pa.
Pennsylvania Wire Glass Co., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Plasteel Products Corp., Washington, Pa.
Puhl & Hepper Mfg. Co., Inc., St. Louis, Mo.
Ralph Mfg. Co., Inc., Wadsworth, Ohio.
Riggin Metal Products, Inc., Kankakee, Ill.
Robertson Co, H. H., Pittsburgh, Pa. (Monitor)
Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Royal Ventilator Co., Philadelphia, Pa.
Ryniker Steel Products Co., Billings, Mont.
St. Paul Corrugating Co., St. Paul, Minn.
Sargent EnginAiring Co., Cleveland, O.
Sheet Metal Mfg. Co., Inc., Brooklyn, N. Y.
Simpson Co., Oakland, Calif.
Sioux Steel Co., Sioux Falls, S. D.
Soule Steel Co., San Francisco, Calif.
Southbridge Roofing Co., Inc., Southbridge, Mass.
Souther Iron Co., E. E., St. Louis, Mo.
Standard Furnace Supply Co., Ltd., Omaha, Nebr.
Standard Ventilator Co., Lewisburg, Pa.
Steelcraft Mfg. Co., Rossmoyne, O.
Swartwout Co., Cleveland, Ohio.
Thor Metal Products Co., Inc., Syracuse, N. Y.
Tierney Rotor Ventilator Co., Minneapolis, Minn.
Tiffin Art Metal Co., Tiffin, Ohio.
Uno Ventilator Co., Malden, Mass.
Vallas, Lionel, Chicago, Ill.
Van Noorden Co., E., Boston, Mass.
Walker Mfg. & Sales Corp., St. Joseph, Mo.
Warner Ventilator Co., LaGrange, Ind. (Spinner)
Waverly Heating Supply Co., Boston, Mass.
Western Engineering & Mfg. Co., Venice, Calif.
Willis Steel Corp., Galesburg, Ill.
York Corrugating Co., York, Pa.

VENTILATORS, VENTILATING SYSTEM

Air Control Products, Inc., Coopersville, Mich.
American Steel Band Co., Pittsburgh, Pa.
Anemostat Corp. of America, New York, N. Y.
Auer Register Co., Cleveland, Ohio.
Barber-Colman Co., Rockford, Ill.
Berger Furnace Mfg. Co., Pittsburgh, Pa.
Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
DeBothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Elgo Shutter & Mfg. Co., Detroit, Mich.
Hart & Cooley Mfg. Co., Holland, Mich.
Ilg Electric Ventilating Co., Chicago, Ill.
Inland Steel Products Co., Milwaukee, Wis.
King Co., Owatonna, Minn.
Kool Air Engineering Co., San Bernardino, Calif.
Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
Lumm Co., A. H., Toledo, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Miller & Doing, Brooklyn, N. Y.
Penn Ventilator Co., Philadelphia, Pa.
Perkinson, William J., Chicago, Ill.
Robbins & Myers, Inc., Springfield, Ohio.
Tuttle & Bailey, Inc., New Britain, Conn.
United States Register Co., Battle Creek, Mich.

VIBRATION ISOLATORS

See Bases and Pads

WARM AIR REGISTER SHIELDS

See Shields, Warm Air Register

WASHERS, AIR, HEATING AND VENTILATING

Capacity 4,000 c.f.m. and up

Air & Refrigeration Corp., New York, N. Y.
Alton Mfg. Co., Dallas, Texas.
American Blower Corp., Detroit, Mich.
Bayley Blower Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Buffalo Forge Co., Buffalo, N. Y.
Carrier Corp., Syracuse, N. Y.
Centri-Spray Co., Detroit, Mich
Clarage Fan Co., Kalamazoo, Mich.
Columbus Heating & Ventilating Co., Columbus, Ohio.
Comfort Products Corp., Dallas, Texas.
Continental Air Filters, Inc., Louisville, Ky.
Furblo Co., Hermansville, Mich.
Mellish & Murray Co., Chicago, Ill.
Mountain States Equipment Co., Denver, Colo.
New York Blower Co., Chicago, Ill.
Peters-Dalton, Inc., Detroit, Mich.
Spray Engineering Co., Somerville, Mass.
Tenny Engineering, Inc., Newark, N. J.
Trane Co., The, LaCrosse, Wis.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
York Corp., York, Pa.

WATER HEATING COILS, FIRE POT

See Coils, Fire Pot, Domestic Hot Water

WATERPROOFING

Coating material

American Fluresit Co., Inc., Cincinnati, Ohio.
American Steel Band Co., Pittsburgh, Pa.
Armstrong Cork Co., Lancaster, Pa.
Angier Corp., Framingham, Mass.
Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Blue Ridge Talc Co., Henry, Va.
Cabot, Inc., Samuel, Boston, Mass.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carey Mfg. Co., Philip, Cincinnati, Ohio.

Carter Paint Co., Liberty, Ind.
Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Flintkote Co., New York, N. Y.
Glidden Co., Cleveland, Ohio.
Henderson & Co., Peter, New York, N. Y. (Coating)
Horn Co., Inc., A. C., Long Island City, N. Y.
Industrial Metal Protectives, Dayton, Ohio.
Insul-Mastic Corp. of America, Pittsburgh, Pa. (Asphalt)
Johns-Manville, New York, N. Y.
Koppers Co., Inc., Pittsburgh, Pa.
Lehon Co., Chicago, Ill.
Metropolitan Refining Co., Inc., Long Island City, N. Y.
Nebel Mfg. Co., Cleveland, Ohio.
North American Mogul Products Co., Cleveland, O.
Pabco Products Inc., San Francisco, Calif.
Reilly Tar & Chemical Corp., Indianapolis, Ind.
Ruberoid Co., New York, N. Y.
Sonneborn Sons, Inc., L., New York, N. Y.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Tamms Industries Inc., Chicago, Ill.
Toch Brothers, Inc., Staten Island, N. Y.
Truscon Laboratories, Detroit, Mich.
Wasco Flashing Co., Cambridge, Mass.
X-Pando Corp., Long Island City, N. Y.

WELDERS, ARC

Air Reduction Sales Co., New York, N. Y. (ac and dc)
Birdsell Mfg. Co., Palo Alto, Calif. (ac)
Borm Mfg. Co., Elgin, Ill. (ac)
Central Transformer Corp., Pine Bluff, Ark. (ac)
Duro-Dyne Corp., Hempstead, L. I., N. Y. (ac)
Electric Arc, Inc., Newark, N. J.
Ergolyte Mfg. Co., Philadelphia, Pa.
Eutectic Welding Alloys Corp., Flushing, N. Y. (ac)
Fern, Ralph, Scranton, Pa.
Gas Arc Supply, Philadelphia, Pa. (gas)
General Electric Co., Schenectady, N. Y.
Hammett Electric Mfg. Co., Kansas City, Mo.
Harnischfeger Corp., Milwaukee, Wis. (Ac & dc)
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Hobart Bros. Co., Troy, Ohio. (Ac & dc)
Hollup Corp., Div. National Cylinder Gas Co., Chicago, Ill.
Lee Co., K. O., Aberdeen, S. D. (ac)
Lincoln Electric Co., Cleveland, Ohio.
Marquette Mfg. Co., Inc., Minneapolis, Minn. (ac)
Metal & Thermit Corp., New York, N. Y. (ac & dc)
Mid-States Welder Mfg. Co., Chicago, Ill. (ac)
Miller Electric Mfg. Co., Inc., Appleton, Wis. (ac & dc)
National Cylinder Gas Co., Chicago, Ill. (ac & dc)
Nelson Specialty Welding Equipment Corp., San Leandro, Calif. (Stud welder)
Nelson Stud Welding Div. Gregory Industries, Inc., Lorain, Ohio. (dc)
Precision Welder Mfg. Co., Chicago, Ill.
Progressive Welder Sales Co., Detroit, Mich. (ac & inert)
Smith Corp., A. O., Milwaukee, Wis. (ac, dc)
Smith Welding Equipment Corp., Minneapolis, Minn. (ac)
Trindl Products, Ltd., Chicago, Ill. (ac)
Westinghouse Electric Corp., Pittsburgh, Pa.
Will-Weld Mfg. Co., Inc., Omaha, Nebr. (ac)

WELDERS, PROJECTION

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Central Transformer Corp., Pine Bluff, Ark.
Eisler Engineering Co., Newark, N. J.
Federal Machine & Welder Co., Warren, Ohio.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Sight Feed Generator Co., West Alexandria, Ohio.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, RESISTANCE

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich
Banner Products Co., Milwaukee, Wis.
Central Transformer Corp., Pine Bluff, Ark.
DoALL Co., Des Plaines, Ill.
Eisler Engineering Co., Newark, N. J.
Expert Welding Machine Co., Detroit, Mich.
Federal Machine & Welder Co., Warren, Ohio.
Micro Products Co., Chicago, Ill.
National Electric Welding Machines Co., Bay City, Mich.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Weldex, Inc., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

WELDERS, SEAM

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Banner Products Co., Milwaukee, Wis.
Central Transformer Corp., Pine Bluff, Ark.
Federal Machine & Welder Co., Warren, Ohio.
National Electric Welding Machines Co., Bay City, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Sciaky Bros., Inc., Chicago, Ill.
Solar Aircraft Co., San Diego, Calif.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.

WELDERS, SPOT

Acme Electric Welder Co., Los Angeles, Calif.
Acro Welder Mfg. Co., Milwaukee, Wis.
Agnew Electric Co., Milford, Mich.
Alphil Spot Welding Co., Brooklyn, N. Y.
Ampower Products Co., Oak Lawn, Ill.
Banner Products Co., Milwaukee, Wis.
Birdsell Mfg. Co., Palo Alto, Calif.
Central Transformer Corp., Pine Bluff, Ark.
Duro-Dyne Corp., Hempstead, L. I., N. Y. (Portable)
Eisler Engineering Co., Newark, N. J.
Electric Arc, Inc., Newark, N. J.
Expert Welding Machine Co., Detroit, Mich.
Federal Machine & Welder Co., Warren, Ohio.
Fern, Ralph, Scanton, Pa.
Generator Sales Co., Chicago, Ill. (Portable)
Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Micro Products Co., Chicago, Ill.
Mid-States Welder Mfg. Co., Chicago, Ill. (Portable)
Miller Electric Mfg. Co., Inc., Appleton, Wis.
National Electric Welding Machines Co., Bay City, Mich.
National Cylinder Gas Co., Chicago, Ill.
Peer, Inc., Benton Harbor, Mich.
Progressive Welder Sales Co., Detroit, Mich.
Rex Welder & Engineering Co., Kansas City, Mo.
Sciaky Bros., Inc., Chicago, Ill.
Solar Aircraft Co., San Diego, Calif.
Spotweld Co., Cleveland, Ohio.
Swift Electric Welder Co., Detroit, Mich.
Taylor-Winfield Corp., Warren, Ohio.
Thomson Electric Welder Co., Lynn, Mass.
Weldex, Inc., Detroit, Mich.
Welding Machines Mfg. Co., Detroit, Mich.
Westinghouse Electric Corp., Pittsburgh, Pa.

WELDING FLUX

See Flux, Welding

WELDING ROD

See Rod, Welding

WELDING TORCHES

See Torches, Brazing, Cutting, Welding

WHEELS, BLOWER

Advance Aluminum Castings Corp., Chicago, Ill.
Air Controls, Inc., Cleveland, Ohio.
Airfan Engineering Co., Los Angeles, Calif.
Barry Blower Co., Minneapolis, Minn.
Bayley Blower Co., Milwaukee, Wis.
Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Brundage Co., Kalamazoo, Mich.
Carolina Blower Co., Inc., Greensboro, N. C.
Champion Blower & Forge Co., Lancaster, Pa.
Chicago Blower Corp., Franklin Park, Ill.
Circulators & Devices Mfg. Corp., Brooklyn, N. Y.
Clarage Fan Co., Kalamazoo, Mich.
Connecticut Blower Co., Hartford, Conn.
General Blower Co., Morton Grove, Ill.
Hastings Air Conditioning Co., Inc., Hastings, Nebr.
Jan-Air, Inc., Richmond, Ill.
Lau Blower Co., Dayton, Ohio.
Martin Fan & Blower Co., Chicago, Ill.
Master Appliance Mfg. Co., Racine, Wis.
Mayne Products Co., Dayton, Ohio.
Morrison Products, Inc., Cleveland, Ohio.
New York Blower Co., Chicago, Ill.
Peerless Electric Co., Warren, Ohio.
Revcor, Carpentersville, Ill.
Robinson Ventilating Co., Zelienople, Pa.
Schwitzer-Cummins Co., Indianapolis, Ind.
Torrington Mfg. Co., Torrington, Conn.
Trane Co., The, LaCrosse, Wis.
Triangle Mfg. Co., Oshkosh, Wis.
U. S. Air Conditioning Corp., Minneapolis, Minn.
Utility Fan Corp., Div. of Utility Appliance Corp., Los Angeles, Calif.
Viking Air Conditioning Div., National Radiator Co., Cleveland, O.
Western Blower Co., Seattle, Wash.
Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

WINDOW PANELS FOR AIR CONDITIONERS

Russell Co., F. C., Cleveland, O.

WINDOWS, METAL, HOLLOW OR EXTRUDED

Adams Co., Dubuque, Iowa.
Biersach & Neidermeyer Co., Milwaukee, Wis.
Detroit Steel Products Co., Detroit, Mich.
International Steel Co., Evansville, Ind.
Jamestown Metal Corp., Jamestown, N. Y.
Perkinson, William J., Chicago, Ill.
Republic Steel Corp., Cleveland, O.
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Russell Co., F. C., Cleveland, Ohio.
Truscon Steel Co., Youngstown, Ohio.
Vallas Lionel, Chicago, Ill.
Willis Steel Corp., Galesburg, Ill.

WINTER AIR CONDITIONERS

See Furnaces, Forced Air

WIRE

Allegheny Ludlum Steel Corp., Pittsburgh, Pa. (Stainless)
Aluminum Co. of America, Pittsburgh, Pa. (Aluminum)
American Nickeloid Co., Peru, Ill. (Chrome, nickel coated)
American Steel & Wire Co., Sub. U. S. Steel Corp., Cleveland, Ohio.
Armco Steel Corp., Middletown, Ohio. (Stainless steel)
Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. (Lead)
Berger Mfg. Div., Republic Steel Corp., Canton, Ohio. (Galv.)
Bethlehem Steel Co., Bethlehem, Pa. (Plain, galvanized)
Bridgeport Brass Co., Bridgeport, Conn. (Brass, bronze)
Chase Brass & Copper Co., Inc., Waterbury, Conn. (Copper)
Columbia-Geneva Steel Div., U. S. Steel Corp., San Francisco, Calif. (Steel)
Conklin Brass & Copper Co., Inc., T. E., New York, N. Y. (Brass, copper & bronze)
Continental Steel Corp., Kokomo, Ind.
Copperweld Steel Co., Glassport, Pa. (Copper covered steel)
Crucible Steel Co., Pittsburgh, Pa. (Steel)
Division Lead Co., Summit, Ill. (Lead, tin)
Hussey & Co., C. G., Pittsburgh, Pa. (Copper)
International Nickel Co., Inc., New York, N. Y. (Nickel & nickel alloys)
Jones & Laughlin Steel Corp., Pittsburgh, Pa. (Galvanized)
Kaiser Aluminum & Chemical Corp., Oakland, Calif. (Aluminum)
Laclede Steel Co., St. Louis, Mo.
National Lead Co., New York, N. Y. (Lead & tin)
Page Steel & Wire Div., American Chain & Cable Co., Inc., Monessen, Pa. (Carbon steel & stainless steel)
Republic Steel Corp., Cleveland, Ohio. (Steel)
Reynolds Metals Co., Louisville, Ky. (Aluminum)
Roebling's Sons Corp., John A., Suby. Colorado Fuel & Iron Corp., Trenton, N. J. (Steel & copper)
Technical Processes Div., Colonial Alloys Co., Philadelphia, Pa. (Aluminum)
Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala. (Steel)
United Wire & Supply Corp., Providence, R. I. (Aluminum, Copper & copper base alloy)
Youngstown Sheet & Tube Co., Youngstown, Ohio.

WIRE GLASS

See Glass, Wire

WIRING MACHINES

See Machines, Wiring

YEAR 'ROUND UNITS

See Units, Air Conditioning

ZONE CONTROLS

See Controls; Control Systems

Section of

American Artisan

1954 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[PART 3—ALL TRADE NAMES]

A

AAF—Air Filters. American Air Filter Co., Inc., Louisville, Ky.

ABC—Blower-Washer Units. American Blower Corp., Detroit, Mich.

ABC—Oil Burners. Automatic Burner Corp., Chicago, Ill.

Absoplane—Stainless Steel Sheets. Apollo Metal Works, Chicago, Ill.

ACB—Metal Protecting Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Ace—Damper Regulators. Martens & Stormoen Co., West Quincy, Mass.

Acid-Proof—Insulating Cement. Quigley Co., New York, N.Y.

Acoustiglu—Cement. Hetzel Roofing Products Co., Newark, N. J.

Acoustilite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Activ-Air—Air Conditioning Furnaces. Heil Co., Milwaukee, Wis.

Activ-Flame—Oil & Gas Burners. Heil Co., Milwaukee, Wis.

A-D Board—Board for Ducts. Philip Carey Mfg. Co., Cincinnati, Ohio.

Ad-A-Draft—Draft Regulators. National Fuel Conservation Co., Inc., White Plains, N.Y.

Ada-Stic—Insulating Cement. Botfield Refractories Co., Philadelphia, Pa.

Adacast—Refractories. Botfield Refractories Co., Philadelphia, Pa.

Adamant—Insulating Cement, Refractories. Botfield Refractories Co., Philadelphia, Pa.

Adapatch—Refractories. Botfield Refractories Co., Philadelphia, Pa.

Aeracool—Fan Blades, Fans, Louvers and Shutters. Myers Electric Co., Inc., Pittsburgh, Pa.

Aerisweld—Welding Rod. Lincoln Electric Co., Cleveland, Ohio.

Aerofan—Fans. Pryne & Co., Inc., Pomona, Calif.

Aerofil—Filters. Besser Metal Products Corp., Charlotte, N.C.

Aerofuse—Air Diffusers. Tuttle & Bailey, Inc., New Britain, Conn.

Aerolux—Oil Furnaces. S. T. Johnson Co., Oakland, Calif.

Aeromatic—Furnaces. United Air Heaters, Inc., Seattle, Wash.

Aeromatic Exhauster.—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Aeropel—Kitchen Exhaust Fans. American Blower Corp., Detroit, Mich.

Aeroplane—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aeroplex—Blowers. Bayley Blower Co., Milwaukee, Wis.

Aeropull—Ventilators. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

Aerovane—Anemometers. Friez Instrument Div., Bendix Aviation Corp., Baltimore, Md.

Aerovane—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.

Afco—Blowers, Blower-Filters, Gas and Oil Burners, Furnaces, Stokers, Air Conditioning Units. American Furnace Co., St. Louis, Mo.

Afco Comfortmaker—Air Conditioning Units. American Furnace Co., St. Louis, Mo.

Afco Duo Blo—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Master-Gas—Furnaces. American Furnace Co., St. Louis, Mo.

Afco Oil Master—Furnaces. American Furnace Co., St. Louis, Mo.

Affco—Louvers. American Foundry & Furnace Co., Bloomington, Ill.

A.G.—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Age—Oil Burners. All-Gas Equipment Co., Milwaukee, Wis.

Agile—Welding Rod. American Agile Corp., Bedford, Ohio.

Agilene—Pipe and Fittings, Plastic Ducts, Plastic Tubing. American Agile Corp., Bedford, Ohio

Agitair—Air Diffusers, Filters, Vanes, Ventilators. Air Devices Inc., New York, N.Y.

Air-Clear—Adsorbers, Electroaire Corp., Long Island City, N. Y.

Air-Con—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.

Air Control—Air Conditioning Units, Blowers, Blower-Filter Units, Blower Housings, Coils, Registers, and Blower Wheels. Hastings Air Conditioning Co., Inc., Hastings, Nebr.

Air Controls—Ridge Ventilator. Plasteel Products Co., Washington, Pa.

Air-Dryette—Dehumidifiers. Solvay Process Div., Allied Chemical & Dye Corp., New York, N.Y.

Air-Flo—Motor Operated Louvers. Air Conditioning Products Co., Detroit, Mich.

Air Guide—Duct Vanes. Titus Mfg. Corp., Waterloo, Iowa.

Air Guide—Registers. S. R. Roberts Co., Marshall, Mich.

Air-Jet—Prefabricated Chimney. General Products Co., Fredericksburg, Va.

Air-Lift—Blowers and Fans. Mauer Engineering, Evanston, Ill.

Air Meter—Anemometers. Hastings Instrument Co., Inc., Hampton, Va.

Air-O-Matic—Air Conditioning Units. Williams Div., Eureka-Williams Corp., Bloomington, Ill.

Air-Out—Ventilator. Accurate Sheet Metal & Mfg. Works, Chicago, Ill.

Air Power—Ventilating Systems. Martin Fan & Blower Co., Chicago, Ill.

Air-Seel—Oil Burners. Caloroil Burner Corp., Hartford, Conn.

Air Set—Combustion Chambers. Harvey, Inc., Sid, Valley Stream, N. Y.

Air Tumbler—Dust Collectors. Dust Suppression & Engineering Co., Lake Orion, Mich.

Air-Turn—Vanes. Barber-Colman Co., Rockford, Ill.

Air-Vane—Registers. Rock Island Register Co., Rock Island, Ill.

Air-Vent—Roofing Felt. Ruberoid Co., New York, N.Y.

Air Wall—Ducts & Fittings, Registers. General Electric Co., Air Conditioning Div., Bloomfield, N. J.

Air Wave—Ventilating Fans. Trade-Wind Motorfans, Inc., Los Angeles.

Air-X-Hauster—Chimney Caps. Ventilators. G. C. Breidert Co., San Fernando, Calif.

Air-X-It—Ventilators. Octagon Ventilator Co., Chicago, Ill.

Airacoustic—Insulation. Johns-Manville, New York, N.Y.

Aircell—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.

Airco—Flux, Welding Rod, Torches and Welding Equipment. Air Reduction Sales Co., New York, N.Y.

Aire-Flo—Blower-Filters, Furnaces. Lennox Furnace Co., Marshalltown, Iowa.

Aire-RAY-ator—Furnaces. Ray Oil Burner Co., San Francisco, Calif.

Airette—Ventilators. Penn Ventilator Co., Philadelphia, Pa.

Airex—Evaporative Coolers, Blowers, Fans, Washers. Mountain States Equipment Co., Denver, Colo.

Airflo—Pipe, Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.

Airfoil—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.

Airfoil—Grilles, Louvers, Registers, Diffusers. Titus Mfg. Corp., Waterloo, Iowa.

Airguide—Hygrometers and Thermometers. Fee & Stemwedel, Inc., Chicago, Ill.

Airistocrat—Fan Blades. Torrington Mfg. Co., Torrington, Conn.

Airjector—Ventilators. Swartwout Co., Cleveland, Ohio.
Airlift—Ventilators. Swartwout Co., Cleveland, Ohio.
Airliner—Fan Blades. Alan E. Burden Co., Los Angeles, Calif.
Airlouver—Louvers. Swartwout Co., Cleveland, Ohio.
Airmat—Throwaway Filters. Airgard Mfg. Co., Chicago, Ill.
Air-Mat—Dust Collectors, Filters, American Air Filter Co., Inc., Louisville, Ky.
Airmover—Ventilators. Swartwout Co., Cleveland, Ohio.
Airo-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Airotor—Blower Wheels. Torrington Mfg. Co., Torrington, Conn.
Airsan—Wire Cloth Filters. Air Filter Corp., Milwaukee, Wis.
Airstat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Airweight—Aluminum Ladders. Newark Ladder & Bracket Co., Inc., Rahway, N. J.
AirXpeler—Chimney Caps and Tops, Heating Coils, Exhausters, Fans, Blowers and Ventilators. C. L. Ammerman Co., Minneapolis, Minn.
Aktiv—Cleaning Compound. Turco Products, Inc., Los Angeles, Calif.
Alaco—Vacuum Cleaner. Ace Co., Ocala, Fla.
Alclad—Sheets. Aluminum Company of America, Pittsburgh, Pa.
Alco—Ventilators. A. H. Lumm Co., Toledo, Ohio.
Alcoa—Aluminum Products. Aluminum Co. of America, Pittsburgh, Pa.
Alcuplate—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alen—Air Conditioning Units and Air Washers. Comfort Products Corp., Dallas, Tex.
Alfer—Metal Sheets. General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Alfol Asbestos—Duct Insulation. Reflectal Corp., New York, N. Y.
All-Sol—Flux. L. B. Allen Co., Inc., Chicago, Ill.
All-Tite—Metal Stampings and Duct Turning Vanes. Elgen Mfg. Corp., Long Island City, N.Y.
Allegheny Metal—Stainless. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allen-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
Alltite—Insulation. Coast Insulating Product, Los Angeles, Calif.
Alma—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Almar—Hand Slitting Machines, Power Flanging Machines. Ward Machinery Co., Chicago, Ill.
Almar Easy—Rotary Slitting Shears. Ward Machinery Co., Chicago, Ill.
Alnifer—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alnor—Thermometers. Illinois Testing Laboratories, Inc., Chicago, Ill.
Alodine—Aluminum surface treatment. American Chemical Paint Co., Ambler, Pa.
Alpine—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
Alsiplate—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Alumaloy EZ Kleen—Air Filters. Research Products Corp., Madison, Wis.
Alumaroll—Metal Awnings. Wagner Awning & Mfg. Co., Cleveland, Ohio.
Alumaweld—Flux and Solder. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Alumbrite—Paint. Thompson & Co., Oakmont, Pa.
Alumi-Flux—Soldering Flux. L. B. Allen Co., Inc., Chicago, Ill.
Alumi-Soder—Aluminum Solder. L. B. Allen Co., Inc., Chicago, Ill.
Alumin-nu—Metal Cleaner. NuSteel Co., Chicago, Ill.
Aluminized—Clad Sheets. American Rolling Mill Co., Middletown, Ohio.
A-Lum-O-Aire—Filters. Aluminum Wool Div., Carey Electronic Engineering Co., Springfield, Ohio.
Aluminweld—Welding Rod. Lincoln Electric Co., Cleveland, Ohio.
Alumseal—Prefabricated Flashings. Wasco Flashing Co., Cambridge, Mass.
Always Reliable—Soldering Furnaces, Torches. Otto Bernz Co., Rochester, N.Y.
AM—Solder. Alpha Metals, Inc., Jersey City, N.J.
Am-Pe-Co—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.
Amazon—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
Amco—Cabinets. Atlas Mfg. Co., St. Paul, Minn.
Amco—Flux. American Solder & Flux Co., Philadelphia, Pa.
Amcoil—Air Conditioners. American Coils, Inc., Newark, N. J.
Amer-glas—Air Filters. American Air Filter Co., Inc., Louisville, Ky.
American—Furnaces. Ryniker Steel Products Co., Billings, Mont.
American—Beading and Crimping Machines. Chas. E. Kraus Mfg. Co., Louisville, Ky.
American—Humidity and Temperature Recorders, Thermometers. Manning, Maxwell and Moore, Inc., Stratford, Conn.
American—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
American HV—Filters. American Air Filter Co., Inc., Louisville, Ky.
Amerivent—Flue Pipe and Fittings. American Metal Products Co., Inc., Los Angeles, Calif.
Amerjet—Blow Pipe Collectors. American Air Filter Co., Inc., Louisville, Ky.
Amerock—Cabinet and Casing Hardware. American Cabinet Hardware Corp., Rockford, Ill.
Aminco—Hygrometers, Relays, Thermostats. American Instrument Co., Silver Spring, Md.
AMS—Pumps. American-Marsh Pumps, Inc., Battle Creek, Mich.
Anaconda—Copper and Brass Products. American Brass Co., New York, N.Y.
Anchor—Hangers. Royal-Apex Mfg. Corp., Brooklyn, N. Y.
Anchor Brand—Rivets. Townsend Co., New Brighton, Pa.
Anchor Brand—Soldering Flux. Garden City Laboratory Div., Pritchardsons, Chicago, Ill.
AnchorAire—Furnaces. Anchor Div., Stratton & Terstegge Co., New Albany, Ind.
Anchorfast—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Anchorite—Nails. Dickson Weatherproof Nail Co., Evanston, Ill.
Anemotherm—Air Velocity Meters. Anemostat Corp. of America, New York, N.Y.
Angle-Chek—Inspection Tool for Sheet Metal Workers. Sheridan-Gray, Inc., Palos Verdes Estates, Calif.
Anthra-flo—Coal Fired Air Conditioning Furnaces. Coal-O-Matic Co., Trucksville, Pa.
Anti-Pluvius—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.
Apartvent—Window Ventilating Fans. Autovent Fan & Blower Div., Herman Nelson Corp., Chicago, Ill.
Apexo—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
Appton—Pneumatic Hammer. Merchandising & Mfg. Associates, Inc., Lancaster, Pa.
Apthorp—Oil Burner Nozzles. Boston Machine Works Co., Lynn, Mass.
Aqua-Clear—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
Aqua-Scale—Automatic Humidifier. J. P. Glasby Mfg. Co., Bloomfield, N. J.
Aquabar—Roof Cement. Continental Products Co., Euclid, Ohio.
Aquadam—Roof Cement, Waterproofing. Blue Ridge Talc Co., Inc., Henry, Va.
Aquella—Waterproofing. Peter Henderson & Co., New York, N. Y.
Aqulux—Water Heaters. S. T. Johnson Co., Oakland, Calif.
A&R—Louvers and Shutters. Air & Refrigeration Corp., New York, N. Y.
ARA—Asbestos Return Air Sheets. Grant Wilson, Inc., Chicago, Ill.
Arc-Eng—Air Conditioning Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Arcoflame—Oil Burners. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Arcoil—Furnaces. Standard Arcoil Corp., Newark, N.J.
Arctic Circle—Evaporative Coolers. International Metal Products Company, Phoenix, Ariz.
Arex-Austor—Ventilators. Arex Co., Chicago, Ill.
Arid-Air—Dehumidifiers. Tamms Industries, Inc., Chicago, Ill.
Arin Accelerator—Louvers and Shutters Arex Co., Chicago, Ill.
Arin Stationary—Louvers and Shutters Arex Co., Chicago, Ill.
Armorize—Paint. Carter Paint Co., Liberty, Ind.
Armstrong—Compressors. General Machinery Co., Spokane, Wash.
Arrow—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Arrow-Line—Water Heaters. Bastian-Morley Co., Inc., La Porte, Ind.
Arrowtrol—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Artcraft—Blowers and Furnaces. Chicago Steel Furnace Co., Chicago, Ill.
ASARCO—Sheets and Roofing. Federated Metals Div., American Smelting and Refining Co., New York, N.Y.
Asbestile—Roof Cement. Johns-Manville, New York, N.Y.
Asbestocel—Furnace Insulation. Johns-Manville, New York, N.Y.
Asco—Relays, Switches, Valves. Automatic Switch Co., Orange, N. J.
Asco—Gutter Fittings and Accessories, Roof Flashings. Atchison Specialty Mfg. Co., Atchison, Kans.
ASMC—Flux. Farrelloy Co., Philadelphia, Pa.
At-A-Glance—Oil Tank Gauge. Krueger Sentry Gauge Co., Green Bay, Wis.
ATC—Thermostats. Ajax Thermostatic Controls Co., Gates Mills, Ohio.
atc—Welding Timers. Automatic Tem-

perature Control Co., Inc., Philadelphia, Pa.

Atlas—Blowers, Furnaces. International Sales Co., San Francisco, Calif.

Atomick—Nozzles, Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.

Atomist—Humidifiers. American Foundry & Furnace Co., Bloomington, Ill.

Attifan—Fans and Ventilators. Kool Air Engineering Co., San Bernardino, Calif.

Auto—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.

Auto-Fyre—Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Auto-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meridan, Conn.

Automat—Gas Burners. National Engineering & Mfg. Co., Sedalia, Mo.

Automaze—Air Filters. Air-Maze Corp., Cleveland, O.

Autostart—Buffers. U. S. Electrical Motors, Inc., Los Angeles, Calif.

AW—Plates, Sheets, Hardened Masonry Nails. Alan Wood Steel Co., Conshohocken, Pa.

AX—Oil Burners. Aldrich Co., Wyoming, Ill.

Axiflo—Fans. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.

Axivane—Fans. Joy Mfg. Co., New Philadelphia, Pa.

B

B-60—Controls. General Controls Co., Glendale, Calif.

BAC—Refrigerating condensers and cooling towers. Baltimore Aircoil Co., Inc., Baltimore, Md.

Bacite—Insulating Cement. Bird-Archer, Philadelphia, Pa.

Baco—Refractories. Bird-Archer, Philadelphia, Pa.

Badger—Time Switches. Reliance Automatic Lighting Co., Racine, Wis.

Baffle Mix—Refractories. Walsh Refractories Corp., St. Louis, Mo.

Balanced Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.

Ball Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Ball-Rite—Electric Drills. Cummins Portable Tool Co., Chicago, Ill.

Balsam-Wool—Flexible Insulation. Wood Conversion Co., St. Paul, Minn.

Bankheat—Oil Burners. S. T. Johnson Co., Oakland, Calif.

Banner—Refractories. Chicago Fire Brick Co., Chicago, Ill.

Bantam—Motors. Small Motors, Inc., Chicago, Ill.

Bantam—Shear. Lincoln Machine Co., Boston, Mass.

Bantam Bully—Air Hammer. Superior Pneumatic & Mfg., Inc., Cleveland, Ohio.

Bar-Ox—Rust Inhibitor. Truscon Laboratories, Detroit, Mich.

Bar Rust—Metal Protecting Paints. Midland Paint & Varnish Co., Cleveland, Ohio.

Barcol—Motors. Barber-Colman Co., Rockford, Ill.

Barrett Specification—Roofing Felt. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Barry—Pillow Blocks, Pulleys. R. & J. Dick Co., Inc., Passaic, N. J.

Basa—Mallets. Greene, Tweed & Co., North Wales, Pa.

Base Isolator—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.

Basmor—Air Conditioning Furnace. Bastian-Morley Co., Inc., LaPorte, Ind.

Baso—Gas Pilots and Solenoid Valves. Milwaukee Gas Specialty Co., Milwaukee, Wis.

BB—Blast Gates, Roof Clips, Damper Clips and Tips, Conductor Fittings and Accessories, Snow Guards. Berger Brothers Co., Philadelphia, Pa.

B&B—Louvers & Shutters, Blower Wheels. Bishop & Babcock Mfg. Co., Cleveland, Ohio.

Beckett—Gas Burners. Horsman-Markin Corp., Detroit, Mich.

Beckett Commodore—Oil Burners. R. W. Beckett Corp., Elyria, Ohio.

Belco—Fans, Louvers. G. J. Belter Electric Mfg. Co., St. Louis, Mo.

Beloit—Sheet Metal Machines, Punches. Hendley & Whittemore Co., Beloit, Wis.

Bemis—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.

Benda-Vane—Registers. Rock Island Register Co., Rock Island, Ill.

Bendit—Benders, Press Brakes. Connors & Davis Sales Corp., West Springfield, Mass.

Berger—Cabinets and Casings, Gutter Accessories, Rooftrim. Republic Steel Corp., Cleveland, O.

Berloy—Building Products. Berger Mfg. Co., Div. Republic Steel Corp., Canton, Ohio.

Beth-Cu-Loy—Sheets. Bethlehem Steel Co., Bethlehem, Pa.

Better-Bilt—Furnaces. Barnes Heating & Ventilating Co., Long Beach, Calif.

BFC—Gas Burners. Moncrief Furnace & Mfg. Co., Dallas, Tex.

B-H—Building Insulation. Baldwin-Hill Co., Trenton, N. J.

B-Line—Motors. Brown-Brockmeyer Co., Dayton, Ohio.

Bifurcator—Blowers. DeBothezat Fans Div. American Machine & Metals, Inc., East Moline, Ill.

Big Bully—Air Hammers. Superior Pneumatic & Mfg., Inc., Cleveland, Ohio.

Bildrite—Sheathing. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.

Billy Penn—Chimney Caps, Gutter and Accessories, Roof Flashings, Mouldings and Trim, Pipe, Ventilators. Penn Supply & Metal Corp., Philadelphia, Pa.

Biltwel—Furnaces. Fraser & Johnston Co., San Francisco, Calif.

Birks—Pittsburgh Lock Opener. Bristol Metal Working Equipment, Hartford, Conn.

Bitumastic—Paint. Koppers Co., Inc., Pittsburgh, Pa.

Bituseal—Paint. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.

Black Arrow—Spray Guns. Black Mfg. Co., Harrison, N.J.

Black Asphalt—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Black Diamond—Built-up Roofing. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Black Flash—Roof Cement. J. C. Whitlam Mfg. Co., Wadsworth, O.

Black Lap—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Blazecrete—Refractories. Johns-Manville, New York, N. Y.

Blend Air—Furnaces. Coleman Co., Inc., Wichita, Kans.

Blo-Aire—Blower-Filter Units. Meyer Furnace Co., Peoria, Ill.

Blo-Fan—Fans. Pryne & Co., Inc., Pomona, Calif.

Bloflex—Flexible Hose. Flexaust Co., New York, N.Y.

Blowette—Blower-Filter Units. Lau Blower Co., Dayton, Ohio.

Blu-Blaze—Chimney Caps, Heaters. Tesco, Inc., Tulsa, Okla.

Blu-Cold—Compressors. Lehigh Mfg. Co., Lancaster, Pa.

Blu-Flame—Incinerators, Heaters, Gas Burners. Vacuum Gas Burner Co., Olean, N.Y.

Blu-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.

Blue Flame—Gas Burners. Zink Co., John, Tulsa, Okla.

Blue Flame—Rotary Oil Burners. Caloroil Burner Corp., Hartford, Conn.

Blue-Point—Drills, Tools. Snap-on Tools Corp., Kenosha, Wis.

Blue Ridge—Wire Glass. Libbey-Owens-Ford Glass Co., Toledo, Ohio.

Blue Ring—Conversion Gas Burners. Niagara Motors Corp., Dunkirk, N. Y.

BNCO—Cabinets and Casings. Biersach & Neidermeyer Co., Milwaukee, Wis.

B-N Multi-stage—Oil Burners, Oil Furnaces. Benner-Nawman, Inc., Oakland, Calif.

Bob-Cat—Electric Hoist. Lisbon Hoist & Crane Co., Lisbon, Ohio.

Bonderite—Metal Cleaner. Parker Rust-Proof Co., Detroit, Mich.

Bondwich—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.

Boomer—Furnaces. Hess-Snyder Co., Massillon, Ohio.

Bosmaco—Heating Equipment. Boston Machine Works Co., Lynn, Mass.

Boston Breeze—Oil Burners. Boston Machine Works Co., Lynn, Mass.

Boston Chrome Steel—Baffles. Boston Machine Works Co., Lynn, Mass.

Boston-Standard—Draft Dampers. Boston Machine Works Co., Lynn, Mass.

Boyer—Power Hammers. Chicago Pneumatic Tool Co., New York, N. Y.

Bradford—Water Heaters. Pennsylvania Range Boiler Co., Philadelphia, Pa.

Branford—Oil Burners. Malleable Iron Fittings Co., Branford, Conn.

Brassweld—Steel Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.

Brazaloy—Aluminum, cast iron, copper, magnesium and silver soldering flux. All-State Welding Alloys Co., Inc., White Plains, N. Y.

Brazo—Bronze Soldering Flux. Linde Air Products Co., New York, N. Y.

Breese—Oil Burners. Jackson G. Gilmore & Co., Columbus, O.

Breez-Air—Fans. Buffalo Forge Co., Buffalo, N. Y.

Breezebuilder—Fans. Bar-Brook Mfg. Co., Inc., Shreveport, La.

Breezemaster—Fans. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.

Breezo—Kitchen Exhaust Fans. Buffalo Forge Co., Buffalo, N. Y.

Breezy-Air—Evaporative Coolers. Barwick Mfg. Corp., Wichita, Kans.

Brentwood—Floor Furnaces, Water Heaters. National Appliances, Inc., Pittsburgh, Pa.

Bressler—Draft Damper Motors. Kol-Master Corp., Oregon, Ill.

Brick-Mix—Plastic Refractory. Chicago Fire Brick Co., Chicago, Ill.

Brilliant—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.

Brilliant Fire—Space Heaters, Furnaces, Dehumidifiers. Ohio Foundry & Mfg. Co., Steubenville, Ohio.

Bronco—Solder. General Plate Div., Metals & Controls Corp., Attleboro, Mass.

Bronzweld—Cast Iron Brazing Flux. Sight Feed Generator Co., West Alexandria, Ohio.

Bronzoil—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.

Brown—Gas Burners. Sterling Engineering Co., St. Louis, Mo.

Brown Electronik—Humidity and Temperature Recorders, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Brownskin—Waterproof Sheathing Paper. Angier Corp., Framingham, Mass.

Bruin—Roofing Paint. Baer Bros., New York, N. Y.

Brule—Incinerators. Goder Incinerator Corp., Chicago, Ill.

BTU—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Buckeye—Space Heaters. Ohio Stove Co., Portsmouth, Ohio.

Budget—Water Heaters. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.

Bulldog—Expansion Bolts. J. D. Polis Mfg. Co., Chicago, Ill.

Bulldog—Snips and Shears. Wiss & Sons Co., Newark, N. J.

Bulldog—Shear. Lincoln Machine Co., Boston, Mass.

Bundyweld—Tubing. Bundy Tubing Co., Detroit, Mich.

Bunker Hill—Roofing, Sheets and Solder, Northwest Lead Co., Seattle, Wash.

Burdco—Propeller Fan Blades. Alan E. Burden Co., Los Angeles, Calif.

Burnall—Incinerators. General Engineering Co., Bay City, Mich.

But-N-tite—Steel Roofing. St. Paul Corrugating Co., St. Paul, Minn.

Buzzer—Gas Soldering Furnaces. Charles A. Hones, Inc., Baldwin, N. Y.

B & W—Refractories & Furnace Insulation. Babcock & Wilcox Co., New York, N. Y.

BX—Oil Burners. Aldrich Co., Wyoming, Ill.

C

C-10—High Temperature Paint. Laclede-Christy Clay Products Co., St. Louis, Mo.

Cable King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.

Calcoda—Waterproofing. Calbar Paint & Varnish Co., Philadelphia, Pa.

California—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.

Calka-Matic—Caulking Guns. Vital Products Mfg. Co., Cleveland, O.

Calkmaster—Caulking Guns. Vital Products Mfg. Co., Cleveland, O.

Caloric—Furnaces. Marshall Furnace Co., Marshall, Mich.

Capillary—Air Conditioning Units, Washers, Filters. Air & Refrigeration Corp., New York, N. Y.

Capital—Furnaces. Farris Furnace Co., Springfield, Ill.

Capitolaire—Furnaces. United States Radiator Corp., Detroit, Mich.

Capri—Air Conditioning Units. Frigid, Inc., Brooklyn, N.Y.

Cara-Flux No. 400—Flux solution. Carajon Chemical Co., Inc., Fremont, Mich.

Carbolite—Soot Remover. Ampion Corp., Long Island City, N. Y.

Carbonaire—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Carburetor-Stoker—Industrial Stokers. Woolley Eng. Co., Detroit, Mich.

Cardolite—Caulking Compound and Paint. Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., Irvington, N.J.

Carex-CP5—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.

Carey Coating—Roofing Paint. Philip Carey Mfg Co., Cincinnati, Ohio.

Careyclad—Metal Protecting Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Careyduct—Prefabricated Ducts and Fittings. Philip Carey Co., Cincinnati, Ohio.

Carilloy—Plate. U. S. Steel Co., Pittsburgh, Pa.

Cast-Refract—Baffles. Quigley Co., Inc., New York, N. Y.

Castalu—Blower Wheels. Advance Aluminum Castings Corp., Chicago, Ill.

Castomatic—Solder. Federated Metals Div., American Smelting and Refining Co., New York, N. Y.

Catomic—Combustion Heads. Quiet Automatic Burner Corp., Newark, N.J.

Caulk-N-Seal—Caulking Compound. Blue Ridge Talc Co., Inc., Henry, Va.

Caulk-O-Seal—Caulking and Glazing Compounds. Calbar Paint & Varnish Co., Philadelphia, Pa.

Cauxeal—Compounds. X-Pando Corp., Long Island City, N. Y.

CDC—Bearings and Pulleys. Chicago Die Casting Co., Chicago, Ill.

Ce-Co—Caulking Compounds & Paints. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.

C-E Heatmaster—Water Heaters. Combustion Engineering Co., Inc., Chattanooga, Tenn.

Cecotite—Roofing Paint. Cheeseman-Elliot Co., Inc., Brooklyn, N. Y.

Ceil-N-Ventor—Fans. Universal Blower Co., Birmingham, Mich.

Cello-Sponge—Evaporators. Viking Air Conditioning Corp., Cleveland, Ohio.

Cementkote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Center-Finder—Protractor. Interstate Sales Co., New York, N. Y.

Centerflo—Industrial Fans. Holden Fan Co., Detroit, Mich.

Centrifugal—Roof Ventilators. Burt Mfg. Co., Akron, Ohio

Centripeller—Ventilating Fans. Paul R. Jordan & Co., Inc., Indianapolis, Ind.

C-H—Relays, Switches and Valves. Cutler-Hammer, Inc., Milwaukee, Wis.

Challenger—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.

Challenger—Air Conditioning Units. Great National Air Conditioning Corp., Oklahoma City, Okla.

Challenger—Circulating Gas Heaters. Independence Stove & Mfg. Co., Independence, Mo.

Challenger—Fans. Signal Electric Mfg. Co., Menominee, Mich.

Challenger—Furnaces. Wheeling Furnace Corp., Martins Ferry, Ohio.

Challenger—Stokers. Kol-Master Corp., Oregon, Ill.

Chamco—Building Insulation. Chamberlin Co. of America, Detroit, Mich.

Champion—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.

Champion—Water Heaters. Crane Co., Chicago, Ill.

Channeldrain—Sheet Metal Roofing. Wheeling Corrugating Co., Wheeling, W. Va.

Cheerfulator—Space Heaters. Adams Bros. Mfg. Co., Inc., Pittsburgh, Pa.

Chester—Water Heaters. Ajax Thermostatic Controls Co., Gates Mills, Ohio.

CHFS Co.—Fittings & Accessories. Chicago Heights Furnace Supply Co., Chicago Heights, Ill.

Chicago—Brakes and Presses. Dreis & Krump Mfg. Co., Chicago, Ill.

Chicago—Stokers. Eddy Stoker Corp., Chicago, Ill.

Chicago—Toggle and Anchor bolts. Chicago Expansion Bolt Co., Chicago, Ill.

Chicago Steel—Snips and Shears. W. A. Whitney Mfg. Co., Rockford, Ill.

Chico Briket—Furnace and Insulating Cement, Refractories. Chicago Fire Brick Co., Chicago, Ill.

Chill Air—Evaporative Coolers, Fans, Recirculating Pumps. National Engineering & Mfg. Co., Sedalia, Mo.

Chinook—Heating Coils. Bayley Blower Co., Milwaukee, Wis.

Chore Boy—Conversion Gas Burner. Standard Fuel Engineering Co., Detroit, Mich.

Chromtrim—Mouldings and Trim. R. D. Werner Co., Inc., New York, N. Y.

Chronat—Furnace Repairs. National Foundry & Furnace Co., Dayton, Ohio.

Chronotherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Chrysler-Airtemp—Heating and Cooling Equipment. Airtemp Div., Chrysler Corp., Dayton, Ohio.

Cibulas—Puttyless Skylights. General Sheet Metal Works, Inc., Bridgeport, Conn.

Cinch—Expansion Bolts. National Lead Co., New York, N. Y.

Cinco—Windows. R. C. Russell Co., Cleveland, Ohio.

Cinkote—Paint. Blue Ridge Talc Co., Inc., Henry, Va.

Cinti—Elbows. Cincinnati Elbow Co., Cincinnati, Ohio.

Circo—Louvers & Shutters, Circulators & Devices Mfg. Corp., New York, N. Y.

Circu-Ray—Furnaces, Heaters. Temco, Inc., Nashville, Tenn.

Circulaire—Wall Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.

Circulataire—Furnace Fan. Corlett-Turner Co., Chicago, Ill.

CJB—Bearings. Ahlberg Bearing Co., Chicago, Ill.

C&L—Soldering Furnaces and Torches. Clayton & Lambert Mfg. Co., Louisville, Ky.

Clason—Snow Guards. M. N. Cartier & Sons Company, Providence, R. I.

Clauss—Snips and Shears. Henkel-Clauss Co., Fremont, Ohio.

Clean Right—Soot Remover. General Filters, Inc., Novi, Mich.

Cleanaire—Blower-Filter Units. Peerless Furnace and Foundry Co., Indianapolis, Ind.

Clearview—Oil Tank Gauge. Boston Machine Works Co., Lynn, Mass.

Cleveland—Burners, Furnaces. Dornback Furnace & Fdy. Co., Cleveland, Ohio.

Clevelander—Water Heaters. Hotstream Heater Co., Cleveland, O.

Climate-Changer—Air Conditioning Units. Trane Co., La Crosse, Wis.

Climate Master—Furnaces. Hess Co., Chicago, Ill.

Climatrol—Air Conditioning Units, Blower-Filter Units, Furnaces, Conversion Burners, Furnace and Smoke Pipe Fittings, Humidifiers, Dehumidifiers, Heaters, Incinerators, Registers. L. J. Mueller Furnace Co., Wilwaukee, Wis.

Clime-Matic—Summer Air Conditioning Units. United Conditioning Corp., Croton Falls, N.Y.

Clincher—Conductor Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.

Clipper—Furnaces. Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Clipper—Kitchen Exhaust Fans. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Clipper—Ventilators. Riggin Metal Products, Inc., Kankakee, Ill.
CM—Cranes, Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Co-Min-Co—Insulating Cement. United States Mineral Wool Co., Stanhope, N.J.
Coal General—School Room and Space Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
Cog-Belt—V Belts. Dayton Rubber Co., Dayton, O.
Colcap—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Coldprest—Housings, Commercial Shearing & Stamping Co., Youngstown, Ohio.
Coldstream—Air Conditioning Units. Baker Refrigeration Corp., South Windham, Me.
Cole—Draft Governor. Cole-Sewell Engineering Co., Minneapolis, Minn.
Collopakes—Roofing Paint. Samuel Cabot, Inc., Boston, Mass.
Colonial—Blower-Filter, Oil Burners, Furnaces, Humidifiers, Heaters, Stokers. Green Colonial Furnace Co., Des Moines, Ia.
Colonial—Conductor Heads and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Columbia—Air Freshening Compounds. Carbide and Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.
Columbia—Furnaces. Sandberg Mfg. Co., Portland, Ore.
Columbia—Insulation. United States Mineral Wool Co., Stanhope, N. J.
Columbia—Ventilators. E. E. Souther Iron Co., St. Louis, Mo.
Combi-Matic—Gas-Oil Burner. Siemon Mfg. Co., Kansas City, Mo.
Combustioneer—Gas & Oil Burners, Furnaces, Humidifiers, & Stokers. Steel Products Engineering Co., Combustioneer Div., Springfield, Ohio.
Comet—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
Comet Exhaustair—Fans and Ventilators. New York Blower Co., Chicago, Ill.
Comfort Flo—Furnaces. Montag Stove & Furnace Works, Portland, Ore.
Comforteer—Space Heaters. Inland Steel Container Co., Chicago, Ill.
Commander—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Commander—Furnaces. Peerless Furnace and Foundry Co., Indianapolis, Ind.
Commander—Furnaces. Round Oak Co., Inc., of Indiana, Dowagiac, Mich.
Compact—Blowers. Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Compact—Oil Burners. Breeze Corp., Inc., Newark, N. J.
Compass V-Steel—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
Concavex—Bearings. Shafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
Condor—Belts. Raybestos-Manhattan, Inc., Passaic, N. J.
Conflex—Solder. General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Coni-Vane—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
Connecticut—Hand Brakes. W. Whitney Stueck, Inc., Old Saybrook, Conn.
Conservoil—Oil Burners. Crane Co., Chicago, Ill.
Consolidated—Presses and Dies. E. W. Bliss Co., Canton, Ohio.
Conterflow—Air Conditioning Furnaces. Western Blower Co., Seattle, Wash.
Controlaire—Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.
Convector—Furnaces. L. J. Mueller Furnace Co., Milwaukee, Wis.
Convector—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
Convertible—Furnaces. Marshall Furnace Co., Marshall, Mich.
Converto—Ventilators. C. L. Ammerman Co., Minneapolis, Minn.
Cool-A-Matic—Air Conditioning Units. Automatic Firing Corp., St. Louis, Mo.
Coolair—Evaporative Cooler Units. Belmetals Mfg. Co., Belmont, Calif.
Coolair—Fans and Ventilators. American Coolair Corp., Jacksonville, Fla.
Cooler-Aire—Air Conditioning Unit. Baltimore Porcelain Steel Corp., Baltimore, Md.
Coolero—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Cooltong—Brazing Torches. Lincoln Electric Co., Cleveland, O.
Cooper-Kote—Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.
Cop-R-Loy—Copper Bearing Steel Sheets. Wheeling Corrugating Corp., Wheeling, W. Va.
Cop-R-Tex—Thru-Wall Flashing. Wasco Flashing Co., Cambridge, Mass.
Copper-Alloy—Sheets. Inland Steel Co., Chicago, Ill.
Copper-Brite—Metal Finishers. Rossaul Co., New York, N. Y.
Copper-Fabric—Flashing. Wasco Flashing Co., Cambridge, Mass.
Copperseal—Flashing. Wasco Flashing Co., Cambridge, Mass.
Copperskin—Waterproof sheathing paper. Angier Corp., Framingham, Mass.
Copper Steel—Copper Bearing Sheets. U. S. Steel Co., Pittsburgh, Pa.
Cor Ten—Steel Plates. Tennessee Coal & Iron Div., U.S. Steel Corp., Fairfield, Ala.
Coral Designs—Controls. Henry G. Dietz Co., Long Island City, N. Y.
Corinco—Insulation. Cork Insulation Co., Inc., New York, N. Y.
Corkboard—Insulation. Armstrong Cork Co., Lancaster, Pa.
Corkboard—Insulation. Mundet Cork Corp., Brooklyn, N. Y.
Corktite—Insulation. Meadows, Inc., W. R., Elgin, Ill.
Corozone—Ozone Apparatus. Coroaire Heater Corp., Cleveland, Ohio.
Corrulux—Plastic Panels. Libby-Owens Ford Glass Co., Toledo, O.
Corvette—Water Heaters. Security Mfg. Co., Kansas City, Mo.
Cottrell Process—Collectors. Western Precipitation Corp., Las Angeles, Calif.
Counterflo—Direct Fired Heaters. Dravo Corp., Pittsburgh, Pa.
Covotop—Roofing Felt. Owens-Corning Fiberglas Corp., Toledo, O.
Cozy—Furnaces. Advance Furnace Co., Wichita, Kans.
CP—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
C/R—Metal Working Mallets. Chicago Rawhide Mfg. Co., Chicago, Ill.
Cradle-Calker—Caulking Guns. Vital Products Mfg. Co., Cleveland, O.
Crane Basmor—Furnaces. Bastian-Morley Co., Inc., LaPorte, Ind.
Crane-Line—Burners, Fans, Furnaces, Water Heaters, Stokers. Crane Co., Chicago, Ill.
Crazy's—Cut-Offs. Galvan Mfg. Co., New Albany, Ind.
Crest—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Crestoloy—Tools. Crescent Tool Co., Jamestown, N. Y.
Cromaloy—Stainless Soldering Flux. Linde Air Products Co., New York, N. Y.
Crusader—Oil Burners. Bethlehem Fdry. & Mach. Co., Bethlehem, Pa.
Cuprometic—Electric Water Heaters. Cuprometal Mfg. Corp., Corona, N. Y.
Custom-Aire—Furnaces and Heaters. Heating Equipment Mfg. Co., San Francisco, Calif.
Cyclo-Core—Rotary Drill Bits. New England Carbide Tool Co., Cambridge, Mass.
Cyclo-Twist—Masonry Drill Bits. New England Carbide Tool Co., Cambridge, Mass.
Cyclone—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.

D

Dampchek—Waterproofing. American Fluresit Co., Inc., Cincinnati, Ohio.
Da-Nite Acratherm—Thermostats. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Daptoblu—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.
Dasco—Punches, Tools. Damascus Steel Products Corp., Rockford, Ill.
D & D—Hole Cutter. N. J. Frayn Co., Redwood City, Calif.
De-Sta-Co—Blower Housings and Stampings. Detroit Stamping Co., Detroit, Mich.
Dearbornaire—Evaporative Coolers. Dearborn Stove Co., Dallas, Tex.
Debecote—Paint. Debevoise Co., Brooklyn, N. Y.
Decoseal—Paints. Debevoise Co., Brooklyn, N. Y.
Defensite Tuf—Paint. Wilbur & Williams Co., Brighton, Mass.
Deflecto—Baffles. Insulation & Refractories Co., Williamson, N. Y.
Deflectrol—Duct Turning Vanes. Barber-Colman Co., Rockford, Ill.
Dehydratine—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.
Deion—Time Switches. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
Delco-Heat—Oil Burners and Furnaces. Delco Appliance Div., General Motors Corp., Rochester, N. Y.
Delde—Power Roll Forming. Doelger & Kirsten, Inc., Milwaukee, Wis.
Delphos—Ridge Roll and Roofing. New Delphos Mfg. Co., Delphos, Ohio.
Deoxidine—Metal Protecting Paint. American Chemical Paint Co., Ambler, Pa.
Dereka—Paint. Debevoise Co., Brooklyn, N. Y.
Desert Air—Burners and Furnaces. Central States Mfg. Co., Inc., Arkansas City, Kans.
Desert Ray—Furnaces and Heaters. Hirsh Mfg. Co., Garland, Texas.
Desomatic—Dehumidifiers. Daly, Merritt & Sullivan, Inc., Falls Church, Va.
Detroit LoStoker—Stokers. Detroit Stoker Co., Detroit, Mich.
Detroit Roto Grate Stoker—Stokers. Detroit Stoker Co., Detroit, Mich.

Detroit RotoStoker—Overfeed Spreader Stoker. Detroit Stoker Co., Detroit, Mich.
Detroit UniStoker—Stokers. Detroit Stoker Co., Detroit, Mich.
Dexter Heat Valve—Ventilators. Swartwout Co., Cleveland, Ohio.
DFC—Insulating Cement. Denver Fire Clay Co., Denver, Colo.
Di-Acro—Precision Machines. O'Neil-Irwin Mfg. Co., Lake City, Minn.
Dial—Damper Regulator. Martens & Stormoen Co., West Quincy, Mass.
Dial—Duct Damper Regulators. Parker-Kalon Div., General American Transportation Corp., New York, N.Y.
Dial-Set—Stokers. Kol-Master Corp., Oregon, Ill.
Diamond—Caulking Compounds, Paint. Thompson & Co., Oakmont, Pa.
Diamond—Smoke Pipe Dampers. Adams Co., Dubuque, Iowa.
Diamond H—Controls, Switches. Hart Mfg. Co., Hartford, Conn.
Dickrope—V-Belts. R. & J. Dick Co., Passaic, N. J.
Diffusaire—Air Diffusers. Hart & Cooley Mfg. Co., Holland, Mich.
Dilecto Sheets—Non-Metallic Sheets. Continental Diamond Fibre Co., Newark, Del.
Directrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Divco—Brushes, Flashing, Flux, Sheets, Solder. Division Lead Co., Summit, Ill.
Dixie—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
Dixie Star—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.
D-O—Air Filters, Odor Adsorbers. Research Products Corp., Madison, Wis.
Do-All—Hammer. Wodack Electric Tool Corp., Chicago, Ill.
Dodge-Timken—Bearings. Dodge Mfg. Corp., Mishawaka, Ind.
Domestigas—Gas Conversion Burners. Thermex Engineering Co., Chicago, Ill.
Do-Mor—Adj. Keyhole Saw. Pioneer Tool Co., Racine, Wis.
Dorex—Odor Absorbers. Connor Eng. Corp., Danbury, Conn.
Double Diamond—Psychrometers, Relays, Switches, Thermometers. H-B Instrument Co., Philadelphia, Pa.
Double-Duty—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Double-Seal—Humidifier Fittings. Hays Mfg. Co., Erie, Pa.
Dover—Conductor Fittings & Wire Hangers. Ohio Wire Products Co., Dover, Ohio.
DovRloy—Sheets. Reeves Steel & Mfg. Co., Dover, Ohio.
Dowmetal—Plates, Sheet, Light Weight Shapes, Welding Rod, Sheets. Dow Chemical Co., Midland, Mich.
Downflame—Gas-Oil Burners, Floor Furnaces. United Air Heaters, Inc., Seattle, Wash.
Downflo—Highboy Furnaces. United Air Heaters, Inc., Seattle, Wash.
Draft-A-Justor—Barometric Dampers. Preferred Utilities Mfg. Corp., New York, N. Y.
Draft-A-Lite — Barometric Dampers. Breese Burners, Santa Fe, N. Mex.
Draft KoreKtor—Damper. Cole-Sewell Engineering Co., Minneapolis, Minn.
Draft-O-Stat—Barometric Dampers. Hotstream Heater Co., Cleveland, Ohio.
Draftender—Gravity Furnace Control Systems. Penn Controls, Inc., Goshen, Ind.
Draftrite—Draft Gages. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Dri-N-Tite—Roof Cement. A. C. Horn Co., Inc., Long Island City, N. Y.
Drifilter—Filters. American Air Filter Co., Inc., Louisville, Ky.
Drifilter—Filters. Airgard Mfg. Co., Chicago, Ill.
Dri-Lap—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.
Drive-it—Power Hammers. Powder Power Tool Corp., Portland, Oreg.
Drou-vel-ite—Skylights. Hirschman-Pohl Co., Inc., LeRoy, N. Y.
Dry Kiln—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Dryola—Incinerators. General Engineering Co., Bay City, Mich.
Dual-A-Fire—Gas-Oil Combination Burners and Furnaces. Automatic Firing Corp., St. Louis, Mo.
Dual-Clone—Blow Pipe Collectors. Day Co., Minneapolis, Minn.
Dual-Dial—Tank Gauge. Rochester Mfg. Co., Inc., Rochester, N. Y.
Dual-Matic—Gas-Oil Combination Burners. J. C. Junior Co., Kansas City, Mo.
Dualvent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Dubblseal—Sheeting. Masonite Corp., Chicago, Ill.
Duc-Pac—Metal Duct and Fittings. Swett Bros., Springfield, Mass.
Duclean—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Duco—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.
Duct Master—Notching Machines. Engel Sheet Metal Equipment, Inc., St. Louis, Mo.
Duct Soundliner—Duct Insulation. Baldwin-Hill Co., Trenton, N. J.
Ductboard—Prefabricated Ducts. Sall Mountain Co., Hamilton, Ohio.
Ducturns—Vanes. Tuttle & Bailey, Inc., New Britain, Conn.
Ductype—Fans. South Bend Air Products, Inc., South Bend, Ind.
Dulux—Enamels, Lacquers and Paints. E. I. du Pont de Nemours & Co., Wilmington, Del.
Duo-Gyrovane—Fans. Dual-Air Fan Corp., South Elgin, Ill.
Duplex—Roofing Cement. Johns-Manville, New York, N.Y.
Duplex Twin—Vibration Isolating Pads. Korfund Co., Long Island City, N.Y.
Dura-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Dura-Line—Heating & Ventilating Registers. Auer Register Co., Cleveland, Ohio.
Dura-Sheen—Flues and Roof Jacks. Baltimore Porcelain Steel Corp., Baltimore, Md.
DuraBilt—Gravity Registers. Auer Register Co., Cleveland, Ohio.
Duraflex—Stokers. Canton Stoker Corp., Canton, Ohio.
Duralite—Refractories. Chicago Fire Brick Co., Chicago, Ill.
Duranite—Paint. Atlas Powder Co., North Chicago, Ill.
Duridine—Chemical Cleaner. American Chemical Paint Co., Ambler, Pa.
Durolite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Duronze—Plates and Sheets. Bridgeport Brass Co., Bridgeport, Conn.
Dust Arrester—Dust and Lint Collectors. American Air Filter Co., Inc., Louisville, Ky.
Dustay—Throwaway Air Filters. Air-Maze Corp., Cleveland, Ohio.
Dust Kop—Dust Collectors. Aget-Detroit Co., Ann Arbor, Mich.
DustRid—Dust Recovery Bags. Master-Craft Supply Co., Inc., Haverstraw, N. Y.
Dustronic—Electrostatic Filters. Small Motors, Inc., Chicago, Ill.
DustStop—Filters. Owens-Corning Fiberglas Corp., Toledo, Ohio.
Dutch Boy—Paints, Solder. National Lead Co., New York, N. Y.
Dux-Sulation—Duct Insulation. Grant Wilson, Inc., Chicago, Ill.
Dycon—Filters. Continental Air Filters, Inc., Louisville, Ky.
Dyna-Flash—Electric Drills. Milwaukee Electric Tool Corp., Milwaukee, Wis.
Dyna Line—Electric Motors. Brown-Brockmeyer Co., Inc., Dayton, O.
Dynafan—Ventilators. Penn Ventilator Co., Philadelphia, Pa.
Dynaflow—Blowers and Fans. South Bend Air Products, Inc., South Bend, Ind.
Dynetric—Balancing Equipment. Gisholt Machine Co., Madison, Wis.

E

EC&M—Controls. Electric Controller & Mfg. Co., Cleveland, O.
Eagle Super "66"—Furnace Insulation. Eagle-Picher Co., Cincinnati, Ohio.
Eagle Supertemp—Duct Insulation. Eagle-Picher Co., Cincinnati, Ohio.
Easternoil—Oil Burners. Eastern Oil & Equipment Co., Portland, Me.
Easy-Flo—Solder. Handy & Harman, New York, N. Y.
Easy-Slip—Gutters. La Crosse Steel Roofing & Corrugating Co., La Crosse, Wis.
E. C. Cord—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.
Echo—Ceiling Ventilators. Elgo Shutter & Mfg. Co., Detroit, Mich.
Eclipse—Refrigerating Compressors. Frick Co., Waynesboro, Pa.
Econo-miser—Oil Burners. Green Colonial Furnace Co., Des Moines, Iowa.
Econocol—Stokers. Cotta Transmission Co., Rockford, Ill.
Economite—Gas Burners. Mid-Continent Metal Products Co., Chicago, Ill.
Economy—Power Hack Saws. F. L. Robertson, Buffalo, N. Y.
Economy—Furnaces. International Heater Co., Utica, N. Y.
Economy—Gas Burners. H-P Products, Louisville, Ohio.
Economy—Adjustable Buffing Hoods. Kirk & Blum Mfg. Co., Cincinnati, Ohio.
Economy—Ventilators. Arex Company, Chicago, Ill.
Economy—Squaring Shears. Acme Equipment Co., Inc., Chicago, Ill.
Economy—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Edgeseal—Filters. Wilson & Co., Inc., Chicago, Ill.
Effico—Ventilators, Hirschman-Pohle Co., LeRoy, N. Y.
Effico Louver—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
EFM—Burners, Furnaces, and Stokers. Electric Furnace-Man, Inc., Emmaus, Pa.
Eiermann—Roofers' Tools. Efsco Products Co., Syracuse, N.Y.
Elastic—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Elastikote—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
Elasto-Rib—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.
El Capitan—Water Heaters. Southwestern Heater Corp., Dallas, Texas

Elcon—Stationary Louvers. Elgo Shutter & Mfg. Co., Detroit, Mich.
Electric Aire—Furnaces. Gray & Dudley Co., Nashville, Tenn.
Electric City—Gutter Forming Machines. F. L. Robertson, Buffalo, N. Y.
Electric Janitor—Draft Damper Motors, Hand Fired Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Electrimatic—Solenoid Valves. Jas. P. Marsh Corp., Skokie, Ill.
Electro-Cell—Filters. American Air Filter Co., Inc., Louisville, Ky.
Electro-Flux-Stik—Soldering Flux. Lake Chemical Co., Chicago, Ill.
Electro Hot—Water Heaters. Red Spot Electric Co., Tacoma, Wash.
Electro-Matic—Filters. American Air Filter Co., Inc., Louisville, Ky.
Electro-Mist—Dust Collectors. American Air Filter Co., Inc., Louisville, Ky.
Electro-PL—Filters. American Air Filter Co., Louisville, Ky.
Electro-Sheet—Roofing. American Brass Co., Waterbury, Conn.
Electro-Valve—Solenoid Valves. Sciaky Bros., Inc., Chicago, Ill.
Electro-Wind—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.
Electroflo—Solenoid Valves. Hays Mfg. Co., Erie, Pa.
Electrolaire—Air Conditioning Furnaces. Electrol Burner Mfg. Co., Rutherford, N. J.
Electromaze—Electrostatic Filters. Air-Maze Corp., Cleveland, Ohio.
Electrunite—Tubing. Steel & Tubes Div., Republic Steel Corp., Cleveland, Ohio.
Elgin—Louvers and Shutters. Elgo Shutter & Mfg. Co., Detroit, Mich.
Elgin—Pneumatic Hammers, Brazing Torches and Welders. Borm Mfg. Co., Elgin, Ill.
EM—Motors. Electric Machinery Mfg. Co., Minneapolis, Minn.
EMC—Motors. Electric Motor Corp., Racine, Wis.
Empire—Mallets. Greene, Tweed & Co., North Wales, Pa.
Empire—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Enamelclad—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Enduro—Stainless Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
Epco—Perforated Metals. Erdle Perforating Co., Rochester, N. Y.
EPCO—Welding Timer. Electronic Products Co., Geneva, Ill.
Era—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.
Era Exl-Air—Furnaces. Excelsior Steel Furnace Co., Chicago, Ill.
Eroduct—Insulation. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Esco—Smoke Pipe Dampers. Eselgroth & Co., Newark, N. J.
Esico—Electric Soldering Coppers. Electric Solding Iron Co., Inc., Deep River, Conn.
Esso—Furnaces, Oil Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.
Eternit—Non-Metallic Sheets. Ruberoid Co., New York, N. Y.
Eternium—Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Eutec Arc—Arc Welders. Eutetic Welding Alloys Corp., Flushing, N. Y.
EutecRods—Welding Rods. Eutectic Welding Alloys Corp., Flushing, N. Y.
Eutec Torch—Torches. Eutectic Welding Alloys Corp., Flushing, N. Y.
Eutector—Flux. Eutectic Welding Alloys Corp., Flushing, N. Y.
EutecTrodes—Welding Rod. Eutectic Welding Alloys Corp., Flushing, N.Y.
Eveco—Barometric Draft Controls. Empire Ventilation Equipment Co., Long Island City, N. Y.
Even-Temp—Furnaces. Northwest Metal Products, Inc., Seattle, Wash.
Everdur—Plates, Sheets, Welding Rod. American Brass Co., New York, N.Y.
Everedy—Oil Burners. Mt. Hawley Mfg. Co., Peoria, Ill.
Everjet—Roofing Paint. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Everlasting—Fastenings. H. M. Harper Co., Morton Grove, Ill.
Ex-L-ite—Tin Plate Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
Exidust—Dust Collectors. Allen Billmyre Div., Lamson Corp., Syracuse, N. Y.
E-Z—Soot Remover. Healy-Ruff Co., St. Paul, Minn.
E-Z—Power Hack Saws. Merchandising and Mfg. Associates, Inc., Lancaster, Pa.
E-Z Arc—Arc Welders. Will-Weld Mfg. Co., Omaha, Nebr.
E-Z Dux—Fiberglas Duct Connections. St. Clair Rubber Co., Marysville, Mich.
E-Z-Hung—Eaves Trough and Gutters. Riggin Metal Products, Inc., Lansing, Mich.
E-Z-On—Damper Clips and Tips, Damper Regulators. M. A. Gerett Corp., Milwaukee, Wis.
EZ Wash—Air Filters. Continental Air Filters, Inc., Louisville, Ky.

F

F Electric—Fan Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Fabricote—Waterproofing. Wasco Flashing Co., Cambridge, Mass.
Fabrikated—Faces, Grilles, Registers. Independent Register Co., Cleveland, Ohio.
Fairweather—Blower-Washer Units. Furblo Co., Hermansville, Mich.
Falco—Sheets. Fairmont Aluminum Co., Fairmont, W. Va.
Fan-Air—Gas Burners. Mettler Co., Inc., The, Los Angeles, Calif.
Fan-Air—Baseboard Diffusers. Premier Furnace Co., Dowagiac, Mich.
Far-Air—Evaporative Coolers, Filters. Farr Co., Los Angeles, Calif.
Farco—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
Fargail—Soldering Flux. Farrelloy Co., Philadelphia, Pa.
Farsol—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
FauceHot—Water Heaters. Bastian-Morley Co., Inc., La Porte, Ind.
F & E—Underfeed Stokers. Flynn & Emrich Co., Baltimore, Md.
Featherfin—Coils. L. J. Wing Mfg. Co., Linden, N. J.
Federal—Oil Filters. Tool Industries, Inc., Detroit, Mich.
Federal—Refractories. U. S. Stoneware Co., New York, N.Y.
Feltex—Roofing Felt. Philip Carey Co., Cincinnati, Ohio.
Fenestra—Heat Insulating Windows. Detroit Steel Products Co., Detroit, Mich.
Fenn's Rotary—Roof Ventilators. Waverly Heating Supply Co., Boston, Mass.
Ferro—Soldering Flux. Linde Air Products Co., New York, N. Y.
Ferro-Therm—Reflective Insulation. American Flange & Mfg. Co., Inc., New York, N. Y.
Ferrobord—Steel Roofing. Truscon Steel Div., Republic Steel Corp., Youngstown, O.
Fibercote—Roofing Paint. Midland Paint & Varnish Co., Cleveland, Ohio.
Fiberglas—Insulation. Owens-Corning Fiberglas Corp., Toledo, Ohio.
Fiberkote—Roofing Cement. National Mfg. Corp., Tonawanda, N. Y.
Fiberlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Fiberock—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Fiber Seal—Paint. Midland Paint & Varnish Co., Cleveland, O.
Fiber Self Seal—Air Filters. Research Products Corp., Madison, Wis.
Fibre Coating—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Fibre Sheets—Non-Metallic Sheets. Continental-Diamond Fibre Co., Newark, Del.
Fibron—Plastic Tubing. Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., Irvington, N.J.
Fibronized—Plastic Tubing. Irvington Varnish & Insulator Co., Irvington, N. J.
Fil-thru—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
Filtered Aire—Blower-Filters. American Foundry & Furnace Co., Bloomington, Ill.
Filterpure—Coils. Betz Corp., Hammond, Ind.
Fin-Flex—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.
Findlay—Stokers. Central Rubber & Steel Corp., Findlay, Ohio.
Finger-Strap—Sheet Metal Fastenings. Gerrard & Co., A. J., Melrose Park, Ill.
Finntense—Conversion Gas Burner. Jerry Finn Engineers, St. Paul, Minn.
Fire Ball—Gas Burners. Johnson Gas Appliance Co., Cedar Rapids, Iowa.
Fire Chief—Oil Burners. Coal-O-Matic Co., Trucksville, Pa.
Fire-Crest—Conversion Burners. Modern Controls Corp., Centerline, Mich.
Fire-Guard—Stokers. Eddy Stoker Corp., Chicago, Ill.
Fire-Hearth—Castable Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Fire-Swirl—Baffles. Zeh Co., Inc., Passaic, N. J.
Firebox—Combustion Chambers. Sid Harvey, Inc., Valley Stream, N. Y.
Firecrete—Refractories. Johns-Manville, New York, N. Y.
Fireite—Cement. Johns-Manville, New York, N. Y.
Fireline—Furnace Firepot Lining. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Firelite—Refractories. Fireline Stove & Furnace Lining Co., Chicago, Ill.
Fireye—Controls. Combustion Control Corp., Boston, Mass.
Firma—Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Firomatic—Fuel Oil Filters, Oil Burner Fittings, Tank Gauges. Morse-Smith-Morse Co., Watertown, Mass.
Fiske—Oil Burners. National Fuel Conservation Co., Inc., White Plains, N. Y.
Fitrite—Conductor, Eaves Trough and Gutter Fittings and Accessories, Skylight Lifts, Snow Guards. David Levow, or Rival Strap Corp., New York, N. Y.
Fixit—Roof Cement. National Mfg. Corp., Tonawanda, N. Y.
Flame Control—Oil Burners. Richfield Mfg. Corp., New Rochelle, N. Y.

Flame-Otrol—Controls. Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
Flash-Off No. 99—Industrial Finish. Acme White Lead & Color Works, Detroit, Mich.
Flash-Rite—Flashing. Figge Co., Chicago, Ill.
Flat-Top—Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.
Flatjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Flatpak—Prefabricated Ducts and Fittings. Viking Mfg. Corp., Cleveland, Ohio.
Fleet Line—Electric Motors. Brown-Brockmeyer Co., Inc., Dayton, O.
Fleetweld—Welding Rod. Lincoln Electric Co., Cleveland, Ohio.
Fleetwelder—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.
Fleur de Lis—Conductor Heads and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Flex-Tube—Draft Gauges. F. W. Dwyer Mfg. Co., Chicago, Ill.
Flexarc—Arc Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
Flexcell—Bases and Pads. Celotex Corp., Chicago, Ill.
Flexflyte—Non-metallic Duct Fittings. Flexible Tubing Corp., Guilford, Conn.
Flexi-Duct—Duct Connections. Grant Wilson, Inc., Chicago, Ill.
Flexiblac—Paint. Samuel Cabot, Inc., Boston, Mass.
Flexon—Flexible Metal Hose and Fittings. Flexonics Corp., Maywood, Ill.
Flexstone—Roofing Felt. Johns-Manville, New York, N.Y.
Flextop—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.
Flo-Co—Furnaces and Gas and Oil Burners. Floral City Heater Co., Monroe, Mich.
Flo-Warm—Gas Burners, Furnaces. Williamson Heater Co., Cincinnati, Ohio.
Flo-Par—Water Heaters. Southwestern Heater Corp., Dallas, Texas
FloRite—Air Velocity Meters. Bacharach Industrial Instrument Co., Pittsburgh, Pa.
Florite Desiccant—Dehumidifier. Floridin Co., Warren, Pa.
Flosol—Soldering Flux. American Chemical Paint Co., Ambler, Pa.
Flowing Heat—Furnaces. Sam Daniels Mfg. Co., Inc., Hardwick, Vt.
Flualyzer—Portable CO_2 Analyzer. Chas. Englehard, Inc., East Newark, N. J.
Flureseal—Waterproofing. American Fluresit Co., Inc., Cincinnati, Ohio.
Flux-Stik—Soldering Flux. Lake Chemical Co., Chicago, Ill.
Fluxrite—Flux. National Lead Co., New York, N. Y.
Foamglas—Insulation. Pittsburgh Plate Glass Co., and Pittsburgh Corning Corp., Pittsburgh, Pa.
Follansbee Forge—Furnace & Smoke Pipe, Fittings & Accessories. Sheet Metal Specialty Div., Follansbee Steel Corp., Follansbee, W. Va.
Fontoheat—Floor Furnaces. Sunshine Mantle Co., Chanute, Kans.
Forbes Econovent—Ventilators. Western Engineering & Mfg. Co., Venice, Calif.
Forbes Syphonaire—Ventilators. Western Engineering & Mfg. Co., Venice, Calif.
Formula 67—Sheet Metal Paint. Babbitt Chemical Specialties Co., New Bedford, Mass.
Fosco Standard—Water Heaters. F. O. Schoedinger, Columbus, Ohio.
Fosco Thermoray—Gas Space Heaters. F. O. Schoedinger, Columbus, Ohio.
4-Way-Flow—Registers. U. S. Register Co., Battle Creek, Mich.
Fracto-Crete—Castable Refractories. Ramtite Co., Chicago, Ill.
Free Exhaust—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
Free Flow—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
Freeman—Gas and Oil Burners, Furnaces, Incinerators, Stokers. Illinois Iron & Bolt Co., Chicago, Ill.
Freeport—Oil Burners. Arrow Foundry Co., Freeport, Ill.
Fresh-Air Maker—Fans. Schwitzer-Cummins Co., Indianapolis, Ind.
Frig-A-Fire—Air Conditioning Units. Automatic Firing Corp., St. Louis, Mo.
Frigid—Fans, Blowers, Housings. Circulators & Devices Mfg. Corp., New York, N. Y.
Fuel-Saver—Automatic Draft Regulator. Walker Mfg. & Sales Corp., St. Joseph, Mo.
Fuel-Tone—Oil Burner Tank Solvent. Radiator Specialty Co., Charlotte, N. C.
Fuelatrol—Oil Burners, Furnaces and Stokers. Premium Coal & Oil Co., Cincinnati, Ohio.
Fueltone—Oil Tank Solvent. Ampion Corp., Long Island City, N. Y.
Fulflo—Oil Filters. Commercial Filters Corp., Melrose, Mass.
Fulljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Fulscope—Control Systems. Taylor Instrument Companies, Rochester, N.Y.
Furnacestat—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Fuseair—Diffusers. Aladdin Heating Corp., Oakland, Calif.
Fyr-Fly—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Fyre-Mortar—Insulating Cement. Quigley Co., Inc., New York, N. Y.
Fyrite—CO_2 Analyzers. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

G

G-6—Paint Spray Guns. Eclipse Air Brush Co., Newark, N.J.
Galbestos—Roofing. H. H. Robertson Co., Pittsburgh, Pa.
Galongage—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
Galv-Kote—Zinc Paint. Geo. H. Ohmer Co., Dayton, Ohio.
Galv-O-Zinc—Coating, Paint. Blue Ridge Talc Co., Inc., Henry, Va.
Galva-Flux—Soldering Flux. London Chemical Co., Chicago, Ill.
Galvaprep—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.
Gar Wood—Furnaces. Enico Products, Detroit, Mich.
Gas-A-Fire—Gas Conversion Burners, Gas Furnaces. Automatic Firing Corporation, St. Louis, Mo.
Gasapack—Controls. A-P Controls Corp., Milwaukee, Wis.
Gasaver—Gas Burners. Williamson Heater Co., Cincinnati, Ohio
Gas Economy—Furnaces. International Heater Co., Utica, N. Y.
Gas Mizer—Furnaces. Floral City Heater Co., Monroe, Mich.
Gas-O-Matic—Gas Burners & Furnaces. Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Gasweld—Soldering Coppers and Torches, Soldering Flux, Welding Rods. Liquid Carbonic Corp., Industrial Gas Div., Chicago, Ill.
GAT—Paint Spray Guns. Eclipse Air Brush Co., Newark, N.J.
G. B. C.—Blowers and Fans. General Blower Co., Inc., Philadelphia, Pa.
G/C—Controls. General Controls Co., Glendale, Calif.
G-E—Air Conditioning Units, Oil Burners, Heating and Cooling Coils, Compressors, Air Conditioning Furnaces. General Electric Co., Bloomfield, N. J.
G-E—Controls, Soldering Coppers, Welding Electrodes, Motors, Transformers, Welders. General Electric Co., Schenectady, N. Y.
G-E—Germicidal Lamps. General Electric Co., Cleveland, Ohio.
Gearmotor—Electric Motors. Philadelphia Gear Works, Inc., Philadelphia, Pa.
Gehl—Stokers. Eddy Stoker Corp., Chicago, Ill.
Gemaco—Compressors. General Machinery Co., Spokane, Wash.
Gemware—Hygrometers. Psychrometers, Thermometers. G. M. Mfg. Co., New York, N. Y.
General—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
General—Water Heaters. Republic Products Co., Philadelphia, Pa.
Genetron—Refrigerants. General Chemical Div., Allied Chemical & Dye Corp., New York, N.Y.
Genoco—Furnaces, Water Heaters, Oil Burners. General Oil Heating Corp., West New York, N. J.
Germicidal—Sterilizing Lamp. General Electric Co., Cleveland, Ohio.
Giant—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Gibraltar—Furnaces and Heaters. Ma-Girl Foundry & Furnace Co., Bloomington, Ill.
Gil Governoret—Gas Pressure Regulating Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
Gilbarco—Furnaces, Oil & Gas Burners. Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gilbert—Combustion Chambers. R. Rehm, St. Albans, N. Y.
Gilco—Water Heaters. J. L. Gillen Co., Dowagiac, Mich.
Gil Nohum—Valves. Gas & Oil Industry Laboratories, Inc., Irvington, N. J.
Gilsalume—Paint. United Gilsonite Laboratories, Scranton, Pa.
Gilt Edge—Furnaces, Stokers. Schwab Furnace Co., Milwaukee, Wis.
Gipsy—Circulating Gas Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Gladiator—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Glasfab—Roofing Felt. Lexsuco, Inc., Cleveland, Ohio.
Glasteel—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.
Glazola—Caulking Compounds. Nebel Mfg. Co., Cleveland, Ohio.
Globe Sizzler—Hot Water Coils. Globe Machinery & Supply Co., Des Moines, Iowa.
Glo-Cone—Gas Burners. Geisel Mfg., Inc., Elyria, Ohio
Glo-Fyr—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Glo-Ring—Gas Burners. Lennox Furnace Co., Marshalltown, Iowa.
Glowan—Gas Burners. J. O. Martin Co., Inc., San Francisco, Calif.
Glycolator—Air Sterilizers. Iron City Chemical Co., Glycolator Div., Valencia, Pa.
Glycosol—Air Sterilizers. Iron City Chemical Co., Glycolator Div., Valencia, Pa.
Gnome—Oil Burners. Breeze Corps., Inc., Newark, N. J.

Go-Eze—Damper Regulators. Severson Mfg. & Supply Co., Milwaukee, Wis.
Gohi—Conductor Pipe, Gutters, Fittings and Accessories, Sheet Metal Roofing. Newport Steel Corp., Newport, Ky.
Gold Bond—Insulation. National Gypsum Co., Buffalo, N. Y.
Gold Bond-Gimco—Rock Wool Products, Insulating Cement. National Gypsum Co., Buffalo, N. Y.
Gordon—Gas Unit Heaters. Roberts-Gordon Appliance Co., Buffalo, N.Y.
Gordon Spreader-Flame—Gas and Gas-Oil Burners and Furnaces. Roberts-Gordon Appliance Corp., Buffalo, N. Y.
G-R—Welders. Glenn-Roberts Co., Oakland, Calif.
Gradutrol—Pneumatic Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Grand Rapids—Furnace Cleaner. Doyle Vacuum Cleaner Co., Grand Rapids, Mich.
Granodine—Coating Process. American Chemical Paint Co., Ambler, Pa.
Greasgo—Metal Cleaners, Polishers and Finishers. Ampion Corp., Long Island City, N.Y.
Greastop—Filters. Air-Maze Corp., Cleveland, Ohio.
Greyhound—Welders. Duro-Dyne Corp., Hempstead, L.I., N.Y.
Grillometer—Direct Reading Air Velocity Meter. Detroit Air Conditioning Service Co., Inc., Nashville, Mich.
GS—Hygrometers, Psychrometers, Brazing Torches, Soldering Torches. General Scientific Equipment Co., Philadelphia, Pa.

H

Hacker—Blowers, Furnaces. Standard Heating Equipment Co., Waterloo, Iowa.
Hair Glass—Filters. H. J. Somers, Inc., Detroit, Mich.
Halco—Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
Halcoloid—Roof Cement. Hallemite Mfg. Co., Cleveland, Ohio
Hallmark—Furnaces. Heating Specialties Co., Baltimore, Md.
Hammerkraft—Paint. Hilo Varnish Corp., Everett, Mass.
Hammer-Sets—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
Hammock—Throwaway Filters. Lennox Furnace Co., Marshalltown, Ia.
Handlead—Lead Roofing Sheets. National Lead Co., New York. N. Y.
Handnib—Punches. Heinrich Tools, Inc., Racine, Wis.
Handy—Pipe, Prefabricated Ducts, Fittings. F. Meyer & Bro. Co., Peoria, Ill.
Handy-Flux—Soldering Flux. Handy & Harman, New York, N. Y.
Hardlead—Lead Roofing. National Lead Co., New York, N. Y.
Hartford-Lincoln—Shear. Lincoln Machine Co., Boston, Mass.
Haylo—Heaters. Frank D. Davison, Inc., Los Angeles, Calif.
H-B—Gas Conversion Burner. Handley Brown Heater Co., Jackson, Mich.
H&C—Furnace Chain, Damper Clips, Dampers, Ceiling Ventilators, and Registers and Grilles. Hart & Cooley Mfg. Co., Holland, Mich.
Hearth-Glo—Space Heaters. Jackes-Evans Mfg. Co., St. Louis, Mo.
Hearth Crete—Refractories. Quigley Co., Inc., New York, N. Y.
Heat-Aid—Furnace Linings. Pyrolite Products Co., Cleveland, Ohio.
Heat Holder—Baffles. Sid Harvey, Inc., Valley Stream, N. Y.
Heat-Lock—Barometric Dampers. National Fuel Conservation Co., Inc., White Plains, N. Y.
Heat-O-Matic—Gas Burners. Liberty Combustion Corp., Syracuse, N.Y.
Heat-O-Meter—Time Switch Heat Controls. Miller-Harris Instrument Co., Milwaukee, Wis.
Heat-Pak—Oil Burners, Water Heaters. Aldrich Co., Wyoming, Ill.
Heat Reclaimer—Heat Savers. C. L. Rayfield Co., Chicago, Ill.
Heat-Rem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.
Heat-Rite—Gravity Registers. Auer Register Co., Cleveland, Ohio.
Heat Seal—Insulation, Cement. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Heatwave—Floor and Wall Furnaces. Southwest Mfg. Co., Aurora, Mo.
Heatwave—Furnaces and Air Conditioning Units. F. E. Myers & Bro. Co., Ashland, O.
Heatwell—Gas Burners. Maxwell Inc., Denver, Colo.
Heavyduty—Duct Damper Regulators. Parker-Kalon Div., General American Transportation Corp., New York, N.Y.
Heet-Master—Kettles. Acroil Products Co., Inc., South Hackensack, N. J.
Heet-O-Matic—Controls. Automatic Controls Corp., Ann Arbor, Mich.
Hellite—Refractories. Johns-Manville, New York, N. Y.
Helyx—Drive Screws, Nails. Hillwood Mfg. Co., Cleveland, Ohio.
Herco—Welders, Transformers. Hercules Electric & Mfg. Co., Inc., Brooklyn, N. Y.
Heresite—Pipe and Fittings. Heremetal Co., Minneapolis, Minn.
Hermetic—Furnaces. Favorite Mfg. Co., Piqua, Ohio.
Hevy-Duty—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Hi-Degree—Paint. Cheesman-Elliot Co., Inc., Brooklyn, N. Y.
Hi-Duty—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.
Hi-Duty—Combustion Chambers. Monogram Products Co., Philadelphia, Pa.
Hi-Ex—Roof Ventilators. Penn Ventilator Co., Philadelphia, Pa.
Hi Heat—Gas Burners. Hansen Gas & Electric Co., San Francisco, Calif.
Hi-Man—Alloy Plates. Inland Steel Co., Chicago, Ill.
Hi-Power—Buffers, Grinders, Drills. Portable Electric Tools, Inc., Chicago, Ill.
Hi-Speed—Electric Dimpler. York Electric Tool Co., York, Pa.
Hi-Speed—Nibblers, Slitters, Shears. Libert Machine Co., Green Bay, Wis.
Hi-Speed—Welding and Cutting Apparatus. Dockson Corp., Detroit, Mich.
Hicycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
High-Duty—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
High-Ten-No. 500—Flux. Industrial Service Laboratories, Milwaukee, Wis.
H&K—Perforated Metals. Harrington & King Perforating Co., Chicago, Ill.
H-M—Gas Pressure Regulating Valves. Thermac Co., Los Angeles, Calif.
Hoffman—Storage Water Heaters. Clayton & Lambert Mfg. Co., Louisville, Ky.
Hold Heat—Soldering Coppers. Turner Brass Works, Sycamore, Ill.
Holegrip—Sheet Metal Fastenings. Fabricated Products Co., West Newton, Pa.
Holgun—Portable Electric Drills. Black & Decker Mfg. Co., Towson, Md.
Hollinator—Incinerators. Holland Furnace Co., Holland, Mich.
Holly Glen—Water Heaters. Hollywood Water Heater Co., Los Angeles, Calif.
Holtite—Screws. Continental Screw Co., New Bedford, Mass.
Home—Oil Burners. Sid Harvey, Inc., Valley Stream, N. Y.
Honeycomb—Air Filters. Wilson & Co., Inc., Chicago, Ill.
Horn-O-Tone—Paint. A. C. Horn Co., Inc., Long Island City, N. Y.
Horneblende—Roof Cement, Paint, Waterproofing. North American Mogul Products Co., Cleveland, O.
Hornlume—Roofing Paint. A. C. Horn Co., Long Island City, N. Y
Hot Blast—Furnaces and Heaters. Cole Hot Blast Mfg. Co., Chicago, Ill.
Hot Blast—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Hot Boy—Space Heaters. Coroaire Heater Corp., Cleveland, Ohio.
Hot Spot—Electric Welders. Acme Electric Welder Co., Los Angeles, Calif.
Hotco—Furnaces, Oil Burners. Hotentot Co., Inc., Omaha, Nebr.
Houston—Gas Heaters. Houston Blow Pipe & Sheet Metal Works, Houston, Texas.
Howell—Oil Burners. Kol-Master Corp., Oregon, Ill.
Huber—Overfeed Stokers. Flynn & Emrich Co., Baltimore, Md.
Humiclean—Cleaning Compound. Carolina Aniline & Extract Co., Charlotte, N. C.
Humid-u-stat—Humidistat. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Humidair—Humidifiers. Skilbeck Mfg. Co., Kenosha, Wis.
Humidair—Washers. American Foundry & Furnace Co., Bloomington, Ill.
Humidigraph—Hygrometers. Bristol Co., Waterbury, Conn.
Humidiguide—Humidistats. Taylor Instrument Companies, Rochester, N.Y.
Humidomist—Nozzles. Supreme Elec. Products Corp., Rochester, N. Y.
Humidostat—Humidistats. Johnson Service Co., Milwaukee, Wis.
Humphrey—Furnaces and Heaters. General Gas Light Co., Kalamazoo, Mich.
Husky-Lite—Combination Machines. Maplewood Machinery Co., Chicago, Ill.
Hydralt—Waterproofing. Flintkote Co., New York, N. Y.
Hydramotor—Gas Pressure Regulating Valves. General Controls Co., Glendale, Calif.
Hydraulic-Action—Controls. White-Rodgers Electric Co., St. Louis, Mo.
Hydro-Temp—Cooling Towers. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Hydro-Whirl—Dust Collectors. Peters-Dalton, Inc., Detroit, Mich.
Hydrocide—Waterproofing. L. Sonneborn Sons., Inc., New York, N. Y.
Hydronon—Waterproofing. Barret Div., Allied Chemical & Dye Corp., New York, N. Y.
Hy-Duty—Blowers, Blower Wheels. Schwitzer-Cummins Co., Indianapolis, Ind.
Hy-Power—Snips and Shears. Wiss & Sons Co., J., Newark, N. J.
Hy-Speed—Hydraulic Tools. Munton Mfg. Co., Franklin Park, Ill.
Hyduty—Ventilators. Davidson Hyduty Roof Fan Co., Newton, Mass.
Hyspar—Cements, Caulking Compounds, Roof Paints. Midland Paint & Varnish

Co., Cleveland, Ohio.
Hytempite—Furnace Cement. Quigley Co., Inc., New York, N. Y.

I

Ideal—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Ideal—Oil Burner Fittings. Boston Machine Works Co., Lynn, Mass.
Ideal—Pipe and Fittings. Riggin Metal Products, Inc., Kankakee, Ill.
Ideal—Roofing Nails. Tennessee Coal and Iron Div., U. S. Steel Corp., Fairfield, Ala.
Ideal—Duct Insulation. Hinde & Dauch Paper Co., Sandusky, Ohio.
Ideal-Aire—Furnaces. American Ideal-Aire Corp., Mineola, N.Y.
IEC—Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.
Ilgette—Kitchen Exhaust Fans. Ilg Electric Ventilating Co., Chicago, Ill.
Illbronze—Aluminum Paste and Powder. Illinois Bronze Powder Co., Inc., Chicago, Ill.
Immersatherm—Domestic Hot Water Control. Mercoid Corp., Chicago, Ill.
Impact—Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
Imperial—Evaporative Coolers. International Metal Products Co., Phoenix, Ariz.
Imperial—Pillow Blocks. Anti-Friction Bearings Co., Los Angeles, Calif.
In-Quik—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
In-tru—Copper Tube Fittings. Parker Appliance Co., Cleveland, O.
Incinor—Incinerators. Bowser, Inc., Incineration Div., Cairo, Ill.
Inco—Paints, Sound Deadener. Inter-Coastal Paint Co., East St. Louis, Ill.
Inco—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.
Inconel—Alloy Plates, Sheets, Tubing, Electrodes. International Nickel Co., Inc., New York, N. Y.
Independent—Furnaces, Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Indian—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Indoor-Outdoor—Thermostats. White-Rodgers Electric Co., St. Louis, Mo.
Industrial Air—Fans, Louvers & Ventilators. Bertram Co., Harvey P., Cincinnati, Ohio.
IngAclad—Plates and Sheets. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Ingels—Elbow Machines. Maplewood Machinery Co., Chicago, Ill.
Inkstop—Filters. Air-Maze Corp., Cleveland, Ohio.
Insa-Late—Insulating Cement. Sauereisen Cements Co., Pittsburgh, Pa.
Instant-Glo—Combustion Chambers. Boston Machine Works Co., Lynn, Mass.
Insul-Lyte—Combustion Chambers and Refractories. Insulating Castable Corp., River Rouge, Mich.
Insulag—Insulation and Insulating Cement. Quigley Co., Inc., New York, N. Y.
Insulate-Windows—Heat Insulating Windows. Chamberlin Company of America, Detroit, Mich.
Insulbrix—Refractories. Quigley Co., Inc., New York, N.Y.
Insulfil—Insulation. Refractory & Insulation Corp., New York, N. Y.
Insulmastic—Waterproofing. Armstrong Cork Co., Lancaster, Pa.
Insulmat—Insulation. J. W. Mortell Co., Kankakee, Ill.
Inter-Matic—Time Switches. International Register Co., Chicago, Ill.
International—Oil Tank Gauge. Applied Mechanics Co., Boston, Mass.
Inversaire—Furnaces. Berger Furnace Mfg. Co., Pittsburgh, Pa.
Ironhide—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Ironweld—Cast Iron Welding Flux. Sight Feed Generator Co., West Alexandria, Ohio.
Irpo—Rust-Proofing. Wolfe-Kote Co., Sheboygan, Wis.
Island City—Registers. Rock Island Register Co., Rock Island, Ill.
Isomode—Vibration Pads. MB Mfg. Co., Inc., New Haven, Conn.
IVCO—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.

J

Jackson—Soldering Coppers. Vulcan Electric Co., Danvers, Mass.
Janette—Blower Wheels and Housings. Jan-Air, Inc., Richmond, Ill.
Janitrol—Gas Burners, Air Conditioning Units, Furnaces. Surface Combustion Corp., Toledo, Ohio.
J & C—Blower-Filter Units and Furnaces. Jackson & Church Co., Saginaw, Mich.
Ject-O-Valve—Ventilators. Swartwout Co., Cleveland, Ohio.
Jenn Air Exhausters—Blowers and Fans. Filkins, Inc., Edward, Chicago, Ill.
Jetglas—Furnaces. Payne Furnace Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Jetglas—Gas Unit Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Jetweld—Welding Rod. Lincoln Electric Co., Cleveland, O.
J. & H.—Electric Motors. Jack & Heintz, Inc., Cleveland, Ohio
Jiffy—Duct Damper Regulators. Parker-Kalon Div., General American Transportation Corp., New York, N.Y.
Jiffy—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
JK—Bar Benders. James Knights Co., Sandwich, Ill.
J-M—Insulation, Roofing. Johns-Manville, New York, N. Y.
Jointite—Insulation. Mundet Cork Corp., North Bergen, N. J.
Jumbo—Oil Burners. Breeze Corps., Inc., Newark, N. J.
June-Aire—Furnaces. American Foundry & Furnace Co., Bloomington, Ill.
Junior—Water Heaters. SuperbO Mfg. Co., Los Angeles, Calif.
JusRite—Ducts, Dampers, Duct Connectors, Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.
JusRite L-Bo—Furnace Pipe and Fittings. Corbman Bros., Inc., Philadelphia, Pa.

K

K-Louver—Sun Reflecting Louvers. Kawneer Co., Niles, Mich.
Kant Krush—Roof Strainers. Grand Rapids Wire Products Co., Grand Rapids, Mich.
Kapco—Asphalt Board. Keystone Asphalt Products Co., Chicago, Ill.
Kasson—Motors. General Die & Stamping Co., New York, N. Y.
Kastite—Castable Refractory. Chicago Fire Brick Co., Chicago, Ill.
Kathabar—Air Conditioning Units. Dehumidifiers. Surface Combustion Corp., Toledo, Ohio.
Kaukit—Caulking Compound. L. Sonneborn Sons, Inc., New York, N. Y.
K-B—Damper Clips and Tips, Regulator Sets. G. L. Kerentoff, Cincinnati, Ohio.
Keldur—Vibration Isolators. Hobsite Products Co., Harrison, N. J.
Ken—Solvents, Baffles, Fuel Oil Tank Gauges. Robert Barclay, Inc., Chicago, Ill.
Keystone—Flashings. Revere Copper and Brass, Inc., New York, N.Y.
Keystone—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Kimsul—Insulation. Kimblery-Clark Corp., Neenah, Wis.
King Gauge—Tank Gauge. Oil Equipment Mfg. Co., New Haven, Conn.
Kirksite—Plates. Monarch Alloys, Ravenna, Ohio
Kirksite—Zinc Sheets. Morris P. Kirk & Son, Inc., Los Angeles, Calif.
Kirkson—Flux, Sheet Solder. Morris P. Kirk & Son, Los Angeles, Calif.
Kitch-N-Ventor—Fans. Universal Blower Co., Birmingham, Mich.
Kitchen-Aire—Kitchen Fans. Stewart Mfg. Co., Indianapolis, Ind.
Kleen-Aire—Furnaces. Steel City Furnace Co., Springdale, Pa.
Kleenflo—Filters. Air-Maze Corp. Cleveland, Ohio.
Kleenit—Oil Burner Tank Solvent. Red Wing Oil Burner Co., inc., Medford, Mass.
Kleenmaster—Furnace Vacuum Cleaners. Molloy Sales Corp., Chicago, Ill.
Klenk's—Snips. W. H. Compton Shear Co., Newark, N. J.
Klixon—Controls, Thermostats. Spencer Thermostat Div., Metals & Controls Corp., Attleboro, Mass.
Klondike—Welders. Ralph Fern, Scranton, Pa.
Klosd—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.
K&M—Insulation. Keasbey & Mattison Co., Ambler, Pa.
Knock-Out—Arc Welders, Torches, Buffers, Grinders, Polishers and Sanders. K. O. Lee Co., Aberdeen, S. D.
Kno-Draft—High Velocity Air Diffusers. Connor Engineering Corp., Danbury, Conn.
KO—Hoists. Stephens-Adamson Mfg. Co., Aurora, Ill.
Kohler—Crimping Machine. Ingram Machinery Co., Picher, Okla.
Kokote—Wire. Continental Steel Corp., Kokomo, Ind.
Kolbcast—Combustion Chambers. Kolb Refractories Co., Philadelphia, Pa.
Kolbkast—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.
Kolstoker—Stokers. Anchor Stove & Range Co., New Albany, Ind.
Kompo-Kork—Vibration Isolating Pads. Korfund Co., Inc., Long Island City, N. Y.
Konik—Sheets and Wire. Continental Steel Corp., Kokomo, Ind.
Kooler-Aire—Air Conditioning Units. U. S. Air Cond. Corp., Minneapolis, Minn.
Koolmaster—Fans. Air Equipment Co., Inc., Chicago, Ill.
Koolshade—Sun Reflecting Screens. Ingersoll Steel Div., Borg-Warner Corp., Chicago, Ill.
Koppax—Paint. Koppers Co., Inc., Pittsburgh, Pa.
Kopro-C.P.-15—Roof Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Korner King—Portable Power Saw. RCS Tool Sales Corp., Joliet, Ill.
Kres-Kno Perco-Flash—Water Heaters. Kresno-Stamm Co., New York, N. Y.

Krome-Kote—Metal Cleaners. Wolfe-Kote Co., Sheboygan, Wis.
Kruzite—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
KRW—Press Brake. K. R. Wilson, Buffalo, N. Y.
Kwik-Melter—Roofers' Kettles. Littleford Bros., Inc., Cincinnati, Ohio.
Kwik-Tite—Copper Tube Fittings. Imperial Brass Mfg. Co., Chicago, Ill.
Kwik-Way—Damper Regulators. Hart & Cooley Mfg. Co., Holland, Mich.
Kwikflo Flux—Soldering Flux. London Chemical Co., Chicago, Ill.
KX-99—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

L

L-Blow—Exhausters, Ventilators. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
LA—Motors. Louis Allis Co., Milwaukee, Wis.
La-Co—Soldering Flux. Lake Chemical Co., Chicago, Ill.
Lacq—Lacquers. Glidden Company, Cleveland, Ohio.
Lactile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Lamneck—Ducts and Duct Fittings, Water Heaters, Pipe and Fittings. Clayton & Lambert Mfg. Co., Louisville, Ky.
Lancol—Stainless Steel Soldering Flux. F. H. Langsenkamp Co., Indianapolis, Ind.
Lapidensin—Waterproofing. American Fluresit Co., Inc., Cincinnati, Ohio.
Larco—Asbestos Paper Paste. Western Mineral Products Co., Minneapolis, Minn.
Larkweld—Welders. Central Transformer Corp., Pine Bluff, Ark.
Lastile—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Latest—Skylight Lifts. Danzer Metal Works Co., Hagerstown, Md.
Lawson—Heaters. United States Stove Co., South Pittsburg, Tenn.
Lead-Head—Nails. W. H. Maze Co., Peru, Ill.
Lead-Seal—Roofing Nails. The Deniston Co., Chicago, Ill.
Leader—Burners, Furnaces. Berger Furnace Mfg. Co., Pittsburgh, Pa.
Leader—Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.
Leadtex—Lead-Coated Sheets. Revere Copper & Brass Inc., New York, N. Y.
Leafcoat—Protective Coated Sheets. Mid-America Steel Warehouses, Chicago, Ill.
Leastoker—Stokers. H. Leslie Leas Co., Monona, Iowa.
Lectro-Glo—Heaters. Day & Night Div. Affiliated Gas Eqiupment, Inc., Monrovia, Calif.
Lectrodryer—Dehumidifier. Pittsburgh Lectrodryer Corp., Pittsburgh, Pa.
Leigh—Shutters, Awnings, Canopies, Ventilators. Air Control Products, Inc., Coopersville, Mich.
Leonard—Circulating Oil Heater. W. R. Ames Co., San Francisco, Calif.
Levelizer—Gas Controls. L. J. Mueller Furnace Co., Milwaukee, Wis.
Levelometer—Oil Tank Gauges. Liquidometer Corp., Long Island City, N. Y.
Liberty—Furnaces, Dowagiac Steel Furnace Co., Dowagiac, Mich.
Liberty—Caulking Compound, Roof Cement, Paint, Waterproofing. Carter Paint Co., Liberty, Ind.
Liberty—Ventilators. Penn Ventilator Co., Philadelphia, Pa.
Life-Line—Motors. Westinghouse Electric Corp., Pittsburgh, Pa.
Lifetime—Roofing, Sheets, Shingles, Conductor Pipe and Fittings, Rivets, Tubing. Reynolds Metals Co., Louisville, Ky.
Light Duty—V-Belts. B. F. Goodrich Co., Akron, Ohio.
Lightening—Hole Punches. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
Lincolnweld—Arc Welders, The Lincoln Electric Co., Cleveland, Ohio.
Lincwelder—Arc Welders. Lincoln Electric Co., Cleveland, Ohio.
Line-O-Flo—Diffusers, Ventilators. Barber-Colman Co., Rockford, Ill.
Liquid Wrench—Rust Preventive Chemicals. Radiator Specialty Co., Charlotte, N.C.
Lite-Cast—Combustion Chambers. Monogram Products Co., Philadelphia, Pa.
Lithoform—Coating Chemical for Galvanized, Zinc or Cadmium surfaces. American Chemical Paint Co., Ambler, Pa.
Little Blacksmith—Punches and Slitting Machines. J. F. Kidder Mfg. Co., Inc., Burlington, Vt.
Little Bobby—Brakes. A. R. Harris, Hammond, Ind.
Little Giant—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.
Little Gem—Gas Burner. Columbia Burner Co., Toledo, Ohio.
Liv-Air—Air Conditioning Furnaces. Livingston, Inc., Marshall, Mich.
Lloyd's—Soldering Flux. Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
L-M—Tubing. Lewin-Mathes Co., St. Louis, Mo.
L & N—Thermometers. Leeds & Northrup Co., Philadelphia, Pa.
Lo-Bill—Storage Water Heater. Autogas Co., Chicago, Ill.
Lo-Blast—Gas Burners. Mid-Continental Metal Products Co., Chicago, Ill.
Lo-Boy—Stokers. Whiting Corp., Harvey, Ill.
Lo-Hed—Electric Hoists. American Engineering Co., Philadelphia, Pa.
Lo-Pilot—Water Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Lo-Set—Stokers. Canton Stoker Corp., Canton, Ohio.
Load King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
Loadgrip—Duct hangers. United Industries, Madison, Wis.
Lock-Joint—Pipe, Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.
Lock-Seam—Blow Pipe Fittings. Chicago Metal Mfg. Co., Chicago, Ill.
Lockaire—Insulation Board. Plastergon Wall Board Co., Buffalo, N. Y.
Lockbolt—Metal Fasteners. Huck Mfg. Co., Detroit, Mich.
Lok-Joint—Insulating Lath. Insulite Div. Minnesota & Ontario Paper Co., Minneapolis, Minn.
Lone Star—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Longhorn—Water Heaters. Hotstream Heater Co., Cleveland, Ohio
Loop-the-Loop—Snow Guards. Danzer Metal Works Co., Hagerstown, Md.
Louver Cone—Air Diffusers. Trane Co., LaCrosse, Wis.
Louver Fin—Air Diffusers. Trane Co., LaCrosse, Wis.
Lovejoy-Ideal—V-belts. Lovejoy Flexible Coupling Co., Chicago, Ill.
Lown—Slip Roll Forming Machines. San Angelo Foundry & Machinery Co., Mt. Vernon, Ill.
Low Type—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
L & R—Conductor Pipe. Lamb & Ritchie Co., Cambridge, Mass.
L-U—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Luco—Acid Brushes, Flux, Solder. Thos. F. Lukens Metal Co., Philadelphia, Pa
Lume-Tex—Aluminum Paint. Truscon Laboratories, Detroit, Mich.
Lumino—Paint. Koppers Co., Inc., Pittsburgh, Pa.
Luminous Flame—Gas Burners. Zink Co., John, Tulsa, Okla.
Lusterlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Lustralumin—Aluminum Paint. Blue Ridge Talc Co., Inc., Henry, Va.
Luxaire—Blower-Filter Units, Burners, Furnaces, Furnace Pipe and Fittings, Incinerators. The C. A. Olsen Mfg. Co., Elyria, Ohio.
Lyonore—Sheets. Lyon-Conklin & Co., Inc., Baltimore, Md.
Lyston—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
Lytestone—Soldering Flux, Tinning Baths. Farrelloy Co., Inc., Philadelphia, Pa.

M

Macheta—Fans, Fan Blades, Ventilators. Aerovent Fan Co., Piqua, Ohio.
Magic-Aire—Wall Furnace. A. C. Co., Los Angeles, Calif.
Magic Chef—Heater. Magic Chef, Inc., St. Louis, Mo.
Magic Dial—Control Systems. Midwest Automatic Control Co., Des Moines, Iowa.
Magic Dial—Thermostats. Perfex Corp., Milwaukee, Wis.
Magic Heat—Furnaces. Marietta Metal Products Corp., Marietta, Pa.
Magic Pivot—Electric Saws. Cummins Portable Tool Co., Chicago, Ill.
Magnehelic—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.
Magne-filter—Air Filters. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Mainliner—Fan Blades. Alan E. Burden Co., Los Angeles, Calif.
Majestic—Roofing. Skylights, Ventilators. W. A. Fingles, Inc., Baltimore, Md.
Mammoth—Furnaces. Stainless & Steel Products Co., Saint Paul, Minn.
Marco—Propeller Fans. Marvin Mfg. Co., Los Angeles, Calif.
Marietta—Enamels and Lacquers. American-Marietta Co., Chicago, Ill.
Mark Time—Time Switches. M. H. Rhodes, Inc., Hartford, Conn.
Marquette—Presses and Dies. E. W. Bliss Co., Canton, Ohio.
Mars—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.
Mars Hi-Boy—Furnaces. Pacific Gas Heating Co., San Francisco, Calif.
Marsalis Chubby—Floor Furnace. American Metal Products Co., Fort Worth, Texas.
Marvair—Air Conditioning Units. Muncie Gear Works, Inc., Muncie, Ind.
Marvel—Water Heaters. Bastian-Morley Co., Inc., La Porte, Ind.
Marvellaire—Gas and Oil Burners, Small Pipe Heating Systems, Air Conditioning Units. Meyer Furnace Co., Peoria, Ill.

Mary-Mac—Storage Water Heaters. McDaniel Mfg. Co., Inc., Dallas, Texas.
Massachusetts—Air Conditioning Units, Blowers, Blower Wheels, Fans. Bishop & Babcock Mfg. Co., Cleveland, Ohio.
Master—Circles, Hangers and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.
Master—Stokers. Muncie Gear Works, Inc., Muncie, Ind.
Master Blowertrol—Thermostatic Hydraulic Control. White Mfg. Co., St. Paul, Minn.
Master Kraft—Coils, Oil Burners, Furnaces. Harvey-Whipple, Inc., Springfield, Mass.
Mastic Board—Insulation. Keystone Asphalt Products Co., Chicago, Ill.
Matchless—Water Heaters. Pacific Coast Heater Corp., San Gabriel, Calif.
Maxdrils—Electric Drills. Cummins Portable Tool Co., Chicago, Ill.
Mayari R—Nickel-Chromium Sheets and Plates. Bethlehem Steel Co., Bethlehem, Pa.
Mayfair—Air Conditioning Units. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, Ohio.
Mayfair—Stokers. Eddy Stoker Corp., Chicago, Ill.
Mayn Air—Stack Head Dampers. Henry Furnace Co., Medina, Ohio.
McIlvaine—Oil Burners. Mason Machine Co., Inc., York, Pa.
McKee—Gas Burners. Eclipse Fuel Engineering Co., Rockford, Ill.
M. E.—Motors. Marathon Electric Mfg. Corp., Wausau, Wis.
Mecco—Doors and Shutters, Skylights, Ventilators. Moeschel-Edwards Co., Inc., Cincinnati, Ohio.
Meco—Gas Welding Rod, Torches. Modern Engineering Co., St. Louis, Mo.
Meco Jiffy—Soldering Torches. Modern Engineering Co., St. Louis, Mo.
Meletron—Controls. Barksdale Valves, Los Angeles, Calif.
Melo-Air—Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.
Mel-Rock—Fans, Ventilators & Washers. Mellish & Murray Co., Chicago, Ill.
Mercury—Soldering Irons. Vulcan Electric Co., Div. Consolidated Electric Lamp Co., Inc., Danvers, Mass.
Merion—Water Heaters. John Wood Co., Conshohocken, Pa.
Metal-Glo—Metal Cleaners. Turco Products, Inc., Los Angeles, Calif.
Metal-Master—Snips and Shears. J. Wiss & Sons Co., Newark, N. J.
Metal Zipper—Arc Welders. Mid-States Welder Mfg. Co., Chicago, Ill.
Metalbestos—Chimney Caps, Pipe and Fittings. William Wallace Co., Belmont, Calif.
Metaleaf—Aluminum Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Metallite—Paints. Glidden Co., Cleveland, Ohio.
Metalmaster—Band Saws. DoAll Co., Des Plaines, Ill.
Metalprep—Rust Preventative Chemicals. Neilson Chemical Co., Detroit, Mich.
Meteor—Hoists. Chisholm-Moore Hoist Corp., Tonawanda, N. Y.
MetroDeck—Steel Roofing. Goldsmith Metal Lath Co., Cincinnati, Ohio.
Metropac—Oil Burners and Gas Furnaces. Metromatic Mfg. Co., Everett, Mass.
Mex-Ko—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Meyco—Furnaces. Meyer Furnace Co., Peoria, Ill.
M.F.C.—Gas Floor Furnaces. Moncrief Furnace & Mfg. Co., Inc., Dallas, Texas.
MGO Combination—Gas-Oil Burners. Mettler Co., Inc., The, Los Angeles, Calif.
M-H—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
M&H—Zinc Sheets. Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
Mica-kote—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.
Micro-Klean—Fuel Oil Filters. Cuno Engineering Corp., Meridan, Conn.
Micro-Mix—Oil Burners. Lennox Furnace Co., Marshalltown, Iowa.
Micro Motor—Motors. Redmond Distributors, Inc., New York, N.Y.
Micro-Weld—Welders. Micro Products Co., Chicago, Ill.
Microlock—Bearings. Shafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
Micromax—Recorders. Leeds & Northrup Co., Philadelphia, Pa.
MicroRold—Stainless Sheets. Washington Steel Corp., Washington, Pa.
Microtherm—Thermostats. Barber-Colman Co., Rockford, Ill.
Midget—Brakes. A. R. Harris, Hammond, Ind.
Midget—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
Midget King—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.
Mighty Midget—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Mighty Midget—Drills. Stanley Elec. Tool Div., The Stanley Works, New Britain, Conn.
Milcor—Furnace Pipe, Roofing and Roofing Products. Inland Steel Products Co., Milwaukee, Wis.
Milwaukee—Presses and Dies. Doelger & Kirsten, Inc., Milwaukee, Wis.
Milwaukee Themoflo—Furnaces. Metzger Machine & Engineering Co., Milwaukee, Wis.
Mindicator—Thermometers. Dickson Co., Chicago, Ill.
Minicorder—Recorders. Dickson Co., Chicago, Ill.
Minit Kote—Metal Cleaner. Klem Chemicals, Inc., Detroit, Mich.
Minnemeyer—Conductor Hooks. La-Crosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Miracle—Insulation Fastenings. Devices, Inc., New York, N.Y.
Miracle Breeze—Evaporative Cooler Units. Arizona Maintenance Co., Tucson, Ariz.
Mirawal—Metal Sheets. Baltimore Porcelain Steel Corp., Baltimore, Md.
Missouri Flint—Fire Brick. Chicago Fire Brick Co., Chicago, Ill.
Mix-Mor—Combustion Heads. National Fuel Conservation Co., Inc., White Plains, N.Y.
Mizzou—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
M&M—Humidifiers and Fittings, Valves. McDonnell & Miller, Inc., Chicago, Ill.
Modern—Incinerators. Modern Controls Corp., Centerline, Mich.
ModernAire—Oil Burners, Slide Rules, Stokers. Heating Wholesalers Co., Des Moines, Ia.
ModernAire—Fans. National Gas Equipment Co., Inc., Terrell, Texas.
Moderne—Blowers, Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.
Moderne-Aire—Furnaces, Blowers. Agricola Furnace Co., Gadsden, Ala.
Modernistic—Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.
Modu-aire—Air Conditioning Units. U.S. Air Cond. Corp., Minneapolis, Minn.
Moduflame—Floor Furnaces. Mahl Mfg. Co., Huntington Park, Calif.
Moduflow—Control Systems. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Modutrol—Duct Damper Motors. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Modu-Wave—Welders. Sciaky Bros., Inc., Chicago, Ill.
Mogul—Rust Preventive Chemicals, Soot Removers, Tank Solvents. North American Fibre Products Co., Cleveland, O.
Moisture Magnet—Dehumidifiers. Remington Air Cond. Div., Remington Corp., Auburn, N. Y.
Moldit—Refractories. Refractory & Insulation Corp., New York, N. Y.
Monarch—Furnaces. Forest City Foundries Co., Cleveland, Ohio.
Moncrief—Blower-Filter Units, Furnaces, Incinerators. Henry Furnace Co., Medina, Ohio.
Monel—Sheets, Plate and Tubing, Electrodes. International Nickel Co., New York, N. Y.
Monitor—Furnaces. Marshall Furnace Co., Marshall, Mich.
Monmouth—Humidifiers. Cleveland Humidifier Co., Cleveland, Ohio.
Mono-Block—Furnace Insulation. Baldwin Hill Co., Trenton, N. J.
Monocast—Refractories. Ramtite Co., Chicago, Ill.
Monogram—Furnaces. Quincy Stove Mfg. Co., Quincy, Ill.
Monolinc—Refractories. Quigley Co., Inc., New York, N.Y.
Monoport—Gas Burners. Modern Controls Corp., Centerline, Mich.
Monovent—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
Morflex—Flexible Couplings. Morse Chain Co., Ithaca, N. Y.
Morlex—Rust Preventives. Carbide and Carbon Chemicals Co., Div. Union Carbide and Carbon Corp., New York, N. Y.
Morse Cyclone—Blow Pipe Collectors. Goergen-Mackwirth Co., Inc., Buffalo, N. Y.
Mor-Sun—Oil Burners, Furnaces. Morrison Steel Products, Inc., Buffalo, N. Y.
Mortemp—Furnaces. Witte-Toledo Co., Mortemp Furnace Div., Dayton, O.
Mortex—Metal Protective Coatings. J. W. Mortell Co., Kankakee, Ill.
Mortite—Caulking and Glazing Compounds, Roofing Paint. J. W. Mortell Co., Kankakee, Ill.
Motorized Draft-O-Stat—Controls. Hotstream Heater Co., Cleveland, Ohio.
Motorstoker—Stokers and Air Conditioning Furnaces. Hershey Machine & Foundry Co., Manheim, Pa.
Mototurb—Ventilators. Uno Ventilator Co., Malden, Mass.
Moyno—Pumps. Robbins & Myers, Inc., Springfield, Ohio.
M-R—Wire Glass. H. H. Robertson Co., Pittsburgh, Pa.
M & T—Arc Welders. Metal & Thermit Corp., New York, N. Y.
Muckle-Vents—Roof Ventilators. Muckle Mfg. Co., Owatonna, Minn.
Mule-Hide—Cement, Caulking Compounds, Paint and Roofing. Lehon Co., Chicago, Ill.
Multi-Duty—Filters. American Air Filter Co., Inc., Louisville, Ky.

Multi-duty—Pulleys. Gates Rubber Co., Denver, Colo.
Multi-Flame—Gas Burners. American Gas Burner, Inc., Indianapolis, Ind.
Multi-Max—Punch Presses. Diamond Machine Tool Co., Los Angeles, Calif.
Multi-V—Belts. B. F. Goodrich Co., Akron, Ohio.
Multi-Vent—Air Diffuser. Pyle-National Co., Multi-Vent Div., Chicago, Ill.
Multi-Zone—Conditioners. Micheli Air Conditioning Co., Inc., Schenectady, N. Y.
Multiblade—Welding Fume Exhausters. General Blower Co., Morton Grove, Ill.
Multiclone—Collectors. Western Precipitation Corp., Los Angeles, Calif.
Multitherm—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.
Multivane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Hyde Park, Boston, Mass.
Murex—Welding Rod. Metal & Thermit Corp., New York, N.Y.
M-VB—Fittings, Valves. Scovill Mfg. Co., Morency-Van Buren Div., Sturgis, Mich.
M/W—Filters. American Air Filter Co., Inc., Louisville, Ky.
Myka-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

N

Nairoil—Oil Burners, Combustion Chambers. National Airoil Burner Co., Philadelphia, Pa.
Nalco—Flux. National Lead Co., New York, N. Y.
NarroWall—Wall Furnaces. Holly Mfg. Co., Pasadena, Calif.
National—Blower-Filter Units, Furnaces. MaGirl Foundry & Furnace Co., Bloomington, Ill.
National—Furnaces. Excelsior Stove & Mfg. Co., Quincy, Ill.
National—Horizontal Furnaces. Stainless & Steel Products Co., St. Paul, Minn.
National—Water Heaters. Mustee Heater Co., Cleveland, Ohio.
National Champion—Furnaces. National Heater Co., St. Paul, Minn.
Natur-Temp—Flame-proof Cotton Insulation. Barnhardt Mfg. Co., Charlotte, N. C.
Naturzone—Board Insulation. Wilson & Co., Inc., Chicago, Ill.
NCG—Soldering and Welding Flux, Welding Rods. National Cylinder Gas Co., Chicago, Ill.
Nebel-Kote—Paint. Nebel Mfg. Co., Cleveland, Ohio.
Nebelastic—Roof Cement, Nebel Mfg. Co., Cleveland, Ohio.
Nelson—Blower-Filter Units, Furnaces, Stokers. Heating Assurance, Inc., Spokane, Wash.
Nelweld—Welders. Nelson Stud Welding Div., Gregory Industries, Inc., Lorain, Ohio.
Nev-A-Rust—Paints. Glidden Co., Cleveland, Ohio.
Never Slip—Conductor Fittings. LaCrosse Steel Roofing & Corrugating Co., LaCrosse, Wis.
Never-Stain—Aluminum Nails, Ridge Roll, Roofing. Nichols Wire & Aluminum Co., Davenport, Iowa.
New American—Smoke Pipe Dampers. Griswold Mfg. Co., Erie, Pa.
New Braze—Flux. Sherman & Co., New York, N. Y.
New Departure—Oil Burners. Breeze Corps., Inc., Newark, N. J.
New Detroit—Draft Gauges. Detroit Air Conditioning Service Co., Inc., Nashville, Mich.
Niagara—Furnaces, Blowers, Oil Burners, Air Conditioning Units. Forest City Foundries Co., Cleveland, Ohio.
Nib-Shear—Power Nibber-Shear. H.A. Mfg. Co., York, Pa.
Nibco—Copper Tube Fittings. Northern Indiana Brass Co., Elkhart, Ind.
Nickeloid—Sheets. American Nickeloid Co., Peru, Ill.
Nifer—Metal Sheets. General Plate Div., Metals & Controls, Attleboro, Mass.
Niteair—Night Air Cooling Fans. Lau Blower Co., Dayton, Ohio.
Nitecool—Fans. Air Equipment Co., Inc., Chicago, Ill.
Nitrox—Rust Preventive Chemicals. Solvay Process Div., Allied Chemical & Dye Corp., New York, N.Y.
Noah's Pitch—Roof Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
NoDrip—Insulation. J. W. Mortell Co., Kankakee, Ill.
No-Dust—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
No-Flex—Registers and Faces. Hart & Cooley Mfg. Co., Holland, Mich.
No-Spat—Welding Flux. Midland Paint & Varnish Co., Cleveland, Ohio.
No-Streak—Registers. Rock Island Register Co., Rock Island, Ill.
No Tar In—Roofing Paint. Rutland Fire Clay Co., Rutland, Vt.
Non-Clogging—Spray Nozzles. Link Belt Co., Chicago, Ill.
Non-Con-Dux—Cement, Paper, Paste. Grant Wilson, Inc., Chicago, Ill.
Non-Syphoning—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.
Norblo—Blowers, Fittings, Collectors, Housing. Northern Blower Co., Cleveland, Ohio.
Norco—Stove and Furnace Repairs. Northwestern Stove Repair Co., Chicago, Ill.
Norwalker—Duct and Duct Fittings, Furnaces, Unit Heaters. Norwalk Air Conditioning Corp., South Norwalk, Conn.
Norwesco—Ducts, Fittings, Flashings, Gutters, Pipe, Ridge Rolls, Roof Trim. Northwest Metal Products, Inc., Seattle, Wash.
Nor'wester—Blowers. Grand Rapids Die & Tool Co., Grand Rapids, Mich.
Novoid—Bases, Insulation. National Cork Co., Englewood, N. J.
Nu-Air—Fan Blades, Fans, Louvres, Ventilators. Meier Electric & Machine Co., Indianapolis, Ind.
Nu Air—Odor Adsorbers. Aerotrol Engineering Corp., Pittsburgh, Pa.
Nu-Alpina—Gravity Roof Ventilators. Inland Steel Products Co., Milwaukee, Wis.
Nu Braze—Flux. American Silver Co., Inc., Flushing, N.Y.
Nu Galv—Metal Protecting Paint. Southern States Iron Roofing Co., Savannah, Ga.
Nu-Notch—Ventilators. Knowles Mushroom Ventilator Co., Upper Montclair, N. J.
Nu-Trojan—Combustion Chambers. A. R. Webber Co., Inc., New Haven, Conn.
Nu-Wood—Rigid Insulation. Wood Conversion Co., St. Paul, Minn.
Nudeck—Roof Cement. United Gilsonite Laboratories, Scranton, Pa.
Nupla—Mallets. New Plastic Corp., Hollywood, Calif.
Nutipe—Gas Conversion Burners. Columbia Burner Co., Toledo, Ohio.

O

Oasis—Dehumidifiers. Ebco Mfg. Co., Columbus, Ohio
Octagon Power—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octogon Siphon—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Octopus—Exhausters. Chelsea Fan & Blower Co., Inc., Plainfield, N. J.
OEM—Combustion Chambers, Oil Burner Fittings. Oil Equipment Mfg. Corp., New Haven, Conn.
Ohio Triple Twisted—Wire Hangers. Ohio Wire Products Co., Dover, Ohio.
Ohioan—Water Heaters. Hotstream Heater Co., Cleveland, O.
Oil-A-Fire—Burners, Furnaces. Automatic Firing Corp., St. Louis, Mo.
Oil-Aire-Flo—Oil Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Oil Economy—Furnaces. International Heater Co., Utica, N. Y.
Oil-Flo—Furnaces. Coal-O-Matic Co., Trucksville, Pa.
Oil-n-Aire—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Oil-O-Matic—Oil Burners, Furnaces Williams Div., Eureka-Williams Corp., Bloomington, Ill.
Oil-Treet—Fuel Oil Solvents. Saginaw Salt Products Co., Saginaw, Mich.
Oilifter—Fuel Oil Pump. A-P Controls Corp., Milwaukee, Wis.
OK—Grinders. Hammond Machinery Builders, Inc., Kalamazoo, Mich.
Ol'Faithful—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
Olympic—Heaters, Washington Stove Works, Everett, Wash.
One-Minute—Furnaces. Worsham Co., Inc., St. Louis, Mo.
Original Dowagiac—Furnaces. Dowagiac Steel Furnace Co., Dowagiac, Mich.
Orlando—Furnaces. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Out-O-Wall—Registers. Rock Island Register Co., Rock Island, Ill.
Ovaltube—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.
OX—Punches. Parker-Kalon Div., General American Transportation Corp., New York, N.Y.
Oxweld—Welding Apparatus. Linde Air Products Co., New York, N. Y.
Ozark—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.
Ozite—Insulation. American Hair & Felt Co., Chicago, Ill.

P

Pabco Coolite—Sheet Metal Paint. Pabco Products Inc., San Francisco, Calif.
Pacific—Furnaces. W. W. Rosebaugh Co., Salem, Ore.
Pacific—Water Heaters. United States Radiator Corp., Detroit, Mich.
Packaged Weather—Store Coolers. General Electric Co., Bloomfield, N. J.
Packard—Water Heaters. W. M. Dary Co., Long Beach, Calif.
Paintbond—Bonderized Sheets. U. S. Steel Co., Pittsburgh, Pa.
Paintgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.
Pak-Ice—Machines. Vilter Mfg. Co., Milwaukee, Wis.
Palco Wool—Saferized—Insulation. Pacific Lumber Co., San Francisco, Calif.
Palm Beach—Controls. National Modulation Co., St. Paul, Minn.

Pandux—Indicating Thermometers. Pacific Transducer Co., Los Angeles, Calif.

Panelaire—Wall Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Panelray—Furnaces, Unit Heaters, Water Heaters. Day & Night Div., Affiliated Gas Equipment, Inc., Monrovia, Calif.

Papico—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Paragon Booster—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Paramount—Evaporative Air Conditioners. Essick Mfg. Co., Los Angeles, Calif.

Paramount—Flashing. Flemm Lead Co., Inc., Long Island City, N. Y.

Paramount—Hollow Metal Windows. Willis Steel Corp., Galesburg, Ill.

Paramount-Master—Evaporative Coolers. Essick Mfg. Co., Los Angeles, Calif.

Parco—Skylight Lifts. Park City Cornice Works, Inc., Bridgeport, Conn.

Parco—Metal Cleaners and Rust Preventive Compounds. Parker Rust-Proof Co., Detroit, Mich.

Parx LPG—Water Heaters. EverHot Heater Co., Detroit, Mich.

Patrol—Gas Burner Pilots. Cleveland Heater Co., Cleveland, Ohio.

Payneheat—Furnaces. Payne Furnace Div. Affiliated Gas Equipment, Inc., Monrovia, Calif.

PBA Unit—Utility Room Furnace. Dowagiac Steel Furnace Co., Dowagiac, Mich.

P-C—Heaters. Pernot Corp., Norwalk, Calif.

Peerless—Stokers. Eddy Stoker Corp., Chicago, Ill.

Peerless—Blowers, Blower-Washer Units. Washers. New York Blower Co., Chicago, Ill.

Peerless—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.

Pemco—Stainless Firebox Fittings, Baffles. Oil Equipment Mfg. Co., New Haven, Conn.

Penetrol—Paint. Flood Co., Cleveland, Ohio.

Penfield—Water Heater. John Wood Co., Conshohocken, Pa.

Penflex—Flexible Metal Hose and Fittings. Pennsylvania Flexible Metallic Tubing Co., Philadelphia, Pa.

Penglass—Roof Ventilators. Pennsylvania Wire Glass Co., Philadelphia, Pa.

Penn-Aire—Furnaces. Union Mfg. Co., Inc., Boyertown, Pa.

Penna—Furnaces. Pennsylvania Furnace & Iron Co., Warren, Pa.

PennSalt—Rust Preventive, Chemicals and Cleaners. Pennsylvania Salt Mfg. Co., Philadelphia, Pa.

Pentco—Punches & Snips. Penn Tool Co., Philadelphia, Pa.

Perco-Flash—Water Heaters. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Percoproof—Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.

Perfectaire—Air Conditioning Units, Dehumidifiers, Furnaces, Oil Heaters, Heat Recoverers. Air Conditioning Engineering Co., Cambridge, Mass.

Perfection—Eaves Trough Fittings and Accessories. Iwan Bros., South Bend, Ind.

Perfecto—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Perim-A-Base—Small Pipe Heating Systems. Berger Furnace Mfg. Co., Pittsburgh, Pa.

Perim I Base—Baseboard Diffusers. Thermo-Products, Inc., North Judson, Ind.

Perima-flo—Metal Duct and Fittings, Furnace Pipe and Fittings. Lennox Furnace Co., Marshalltown, Ia.

Perm-Align—Electric Drills. Cummins Portable Tool Co., Chicago, Ill.

Perma-Fan—Drayer-Hanson, Inc., Los Angeles, Calif.

Permaclad—Clad Sheets. Alan Wood Steel Co., Conshohocken, Pa.

Permadine—Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.

Permaglas—Water Heaters. A. O. Smith Corp., Milwaukee, Wis.

Pernoco—Evaporative Coolers. Pernot Corp., Norwalk, Calif.

PeTeCo—Baffles and Combustion Chambers. B. A. Peterson Co., Dowagiac, Mich.

Pexto—Metal Workers' Machines and Tools, Roofers Tools. Peck, Stow & Wilcox Co., Southington, Conn.

P & H—Cranes, Welding Rods, Electrodes, Hoists, Arc Welders. Harnischfeger Corp., Milwaukee, Wis.

Pickle Polish—Stainless Cleaner. American Chemical Paint Co., Ambler, Pa.

Pilotstat—Gas Pilot Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Pioneer—Controls. Crown Controls Co., Inc., New Bremen, Ohio.

Pittsburgh—Suspended Furnaces, Gas Fired Unit Heaters. Automatic Gas Equipment Co., Pittsburgh, Pa.

P.I.V.—Variable Speed Transmissions. Link Belt Co., Chicago, Ill.

P-K—Nails, Screws. Parker-Kalon Div., General American Transportation Corp., New York, N. Y.

Planeweld—Welding Rod. Lincoln Electric Co., Cleveland, Ohio.

Plasti-Static—Air Filters. Master Products Co., Inc., Chicago, Ill.

Plasti-Calk—Caulking Compounds. Chamberlin Co. of America, Detroit, Mich.

Plastic Elastigum—Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.

Plastic Insulcrete—Refractories. Quigley Co., Inc., New York, N. Y.

Plastic PB—Cement Barret Div., Allied Chemical & Dye Corp., New York, N. Y.

PlastiKon—Rubber Putty. B. F. Goodrich Co., Akron, Ohio.

Plastiktrim—Plastic Mouldings, Trim. R. F. Werner Co., New York, N. Y.

Plastite—Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Plastoid—Caulking Compounds, Furnace Cement. Plastic Products Co., Detroit, Mich.

Playford—Stokers. Rosedale Foundry & Machine Co., Pittsburgh, Pa.

Plexiform—Blowers. Bayley Blower Co., Milwaukee, Wis.

Porto-Shear—Electric Shears. Black & Decker Mfg. Co., Towson, Md.

Portovent—Flexible Hose. Flexaust Co., New York, N.Y.

Power-Flow—De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.

Power-Line—Staplers. Powers Wire Products Co., Monroe, Mich.

Power-Pac—Fans. Uno Ventilator Co., Malden, Mass.

Power-Poise—Electric Motors. Brown-Brockmeyer Co., Inc., Dayton, O.

Power Vane—Pneumatic Grinders. Chicago Pneumatic Tool Co., New York, N. Y.

Poweraire—Furnaces. Jackson & Church Co., Saginaw, Mich.

Powergas—Gas Burners. Jackson & Church Co., Saginaw, Mich.

Powerhouse—Insulating Cement. Baldwin-Hill Co., Trenton, N. J.

Poweroil—Oil Burners. Jackson & Church Co., Saginaw, Mich.

PowerRated—Commercial-Industrial Furnaces. Jackson & Church Co., Saginaw, Mich.

Powerstat—Gas Pressure Regulating Valves. Mercoid Corp., Chicago, Ill.

Powrmatic—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Park, N. J.

Prairie Schooner—Portable Furnaces. Lennox Furnace Co., Marshalltown, Ia.

Precipitron—Electrostatic Air Filter. Westinghouse Elec. Corp., Sturtevant Div., Hyde Park, Boston 36, Mass.

Premier—Welding Rod. American Steel & Wire Co., Cleveland, Ohio.

Premier Automatik—Stoker-Fired Air Conditioning Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier DeLuxe—Furnaces. Premier Furnace Co., Dowagiac, Mich.

Premier Master—Furnaces. Premier Furnace Co., Dowagiac, Mich.

Pre-Notch—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.

Preprite—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Prepwash—Rust Preventive Chemicals. Neilson Chemical Co., Detroit, Mich.

Presstico—Furnace and Roof Cement, Compounds, Paint. Presstite Engineering Co., St. Louis, Mo.

Presteel—Metal Stampings. Worcester Pressed Steel Co., Worcester, Mass.

Presto—Soldering Torch. American Products Corp., Chicago, Ill.

Prest-O-Lite—Soldering Coppers, Soldering Torches, Welding Equipment. Linde Air Products Co., New York, N. Y.

Prest-O-Weld—Oxy-Acetylene Welding Equipment, Torches. Linde Air Products Co., New York, N. Y.

Prime-Kote—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Princo—Hygrometers, Psychrometers, Electric Relays, Thermometers and Thermostats. Precision Thermometer and Instrument Co., Philadelphia, Pa.

Propellair—Fans and Ventilators. Robbins & Myers, Inc., Springfield, Ohio.

Prop-R-Temp—Air Conditioning Units. Typhoon Air Cond. Co., Inc., Brooklyn, N. Y.

Protectal—Sheet Metal Paint. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Protecto-glo—Controls. Minneapolis-Honeywell Reg. Co., Minneapolis, Minn.

Protectoline—Rust Preventive Chemicals. Magnus Chemical Co., Garwood, N. J.

Protector—Snow Guards. David Levow, New York, N. Y.

Protector—Germicidal Lamps. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.

Protectorelay—Oil Burner Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Puffglass—Air Filters. Drico Industrial Corp., New York, N. Y.

Pul-Air—Ventilators. Penn Ventilator Co., Philadelphia, Pa.

Pul-Lift—Hoist. Yale & Towne Mfg. Co., Philadelphia, Pa.

Punchawl—Tools. Hub Specialty Co., Reading, Mass.

Pur Air—Odor Absorbers. Barnebey-Cheney Co., Columbus, O.

Pure Dure—Water Heaters. Continental Water Heater Co., Los Angeles, Calif.

Purox—Oxy-Acetylene Welding Equipment and Torches. Linde Air Products Co., New York, N. Y.
Pyralux—Enamels and Lacquers. E. I. du Pont de Nemours & Co., Wilmington, Del.
Pyrotron—Temperature Recorders. Bailey Meter Co., Cleveland, Ohio.

Q

Quad—Furnace Blowers. Trade-Wind Motorfans, Inc., Los Angeles, Calif.
Quaker—Space Heaters. Florence Stove Co., Gardner, Mass.
Quaker City—Eaves Trough and Gutters, Conductor Fittings and Accessories, Pipe, Ridge Rolls and Ridging. Berger Bros. Co., Philadelphia, Pa.
Quantrol—Duct Turning Vanes. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Q-Chrome—Insulating Cement. Quigley Co., Inc., New York, N. Y.
Q-Chromastic—Insulating Cement. Quigley Co., Inc., New York, N. Y.
Quick Action—Clamps. Roesch Tool Products, Los Angeles, Calif.
Quick-As-Wink—Solenoid Valves, Metal Hose. Hunt & Son, Inc., C. B., Salem, Ohio
Quick Heat—Furnaces, Heaters. American Stove Co., St. Louis, Mo.
Quick Heat—Heating Equipment. Tjernlund Mfg. Co., St. Paul, Minn.
Quick Heater—Oil Burners, Furnaces, Stokers. Quick Furnace & Supply Co., Des Moines, Iowa.
Quick-Set—Dividers and Notchers. Reiner & Campbell Co., Inc., Elizabeth, N. J.
Quick-Set—Waterproofing. American Fluresit Co., Inc., Cincinnati, Ohio.
Quickwork—Shears and Sheet Metal Machines. Whiting Corp., Harvey, Ill.
Quiet Flame—Oil Burners. Volcano Burner Corp., New York, N. Y.
Quiet Kool—Air Conditioning Units. Quiet-Heet Mfg. Corp., Newark, N. J.
Quiet Zone—Blowers. Palmer Mfg. Co., Phoenix, Ariz.
Quilt—Insulation. Samuel Cabot, Inc., Boston, Mass.
Q-T Ductliner—Celotex Corp., Chicago, Ill.

R

Racine—Stokers. Nelson Bros. & Strom Co., Racine, Wis.
Radex—Electrostatic Filters. Small Motors, Inc., Chicago, Ill.
Radiaire Base-Heat—Baseboard Diffusers. York-Shipley, Inc., York, Pa.
Radiant—Heaters. Phillips & Buttorff Mfg. Co., Nashville, Tenn.
RadianTile—Ducts and Fittings. Cannelton Sewer Pipe Co., Cannelton, Ind.
Radius Master—Templates. Rapidesign, Inc., Glendale, Calif.
Radolite—Insulating Cement and Refractories. Pyrolite Products Co., Cleveland, Ohio.
Ramco—Chimney Caps and Tops, Ventilators. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.
Ramfeed—Stokers. Canton Stoker Corp., Canton, Ohio.
Ranarex—CO_2 Analyzers. Permutit Co., New York, N. Y.
Ranchief—Furnaces. Conco Engineering Works, Mendota, Ill.
Range-Ventor—Fans. Universal Blower Co., Birmingham, Mich.
Rawl-Anchors—Bolts. Rawlplug Co., Inc., New York, N. Y.
Rawl-Drive—Masonry Nails and Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
Rawl-Tapers—Expansion Bolts. Rawlplug Co., Inc., New York, N. Y.
Rawl-Toggle Bolts—Bolts. Rawlplug Co., Inc., New York, N. Y.
Raymaster—Refrigerant Leak Detectors. Gates & Co., Inc., George W., Franklin Sq., L. I., N.Y.
Reco—Coils. Roessing Mfg. Co., Pittsburgh, Pa.
Reco—Fans, Motors, Buffers, Relays and Switches. Reynolds Electric Co., River Grove, Ill.
Recoy—Air Conditioning Units and Coils. Refrigeration Economics Co., Inc., Canton, Ohio.
Red Cap—Spinner Ventilator. Warner Ventilator Co., LaGrange, Ind.
Red Crown—Domestic Water Heaters. Hynes & Cox Electric Corp., Watervliet, N. Y.
Red Devil—Furnace Cement. Pecora Paint Co., Philadelphia, Pa.
Red End—Saws. Simonds Saw & Steel Co., Fitchburg, Mass.
Red Metal—Roof Paint. Rutland Fire Clay Co., Rutland, Vt.
Red Metallic—Roofing Paint. Clinton Metallic Paint Co., Clinton, N. Y.
Red-Reading-Mercury—Hygrometers, Psychrometers and Thermometers. The Palmer Thermometers, Inc., Cincinnati, Ohio.
Red Seal—Sheets. Benjamin Wolff and Co., Chicago, Ill.
Red Streak—Shear Blades. Simonds Saw & Steel Co., Fitchburg, Mass.
Red Top—Insulation. United States Gypsum Co., Chicago, Ill.
Red Top—Thermostats. H-B Instrument Co., Philadelphia, Pa.
Red X—Cleaners and Polishers. Turco Products, Inc., Los Angeles, Calif.
Reddy-On—Furnace Door Closer. Leisur-Maid Mfg. Corp., Grand Rapids 3, Mich.
Redi—Stokers. General Machinery Co., Spokane. Wash.
Redi-Flo—Registers. Air Conditioning Products Co., Detroit, Mich.
Redi-Nail—Eaves Trough Hangers. Abbott Mfg. Co., Painesville, Ohio.
Redi-Paint—Sheet Metal Paint. Turco Products, Inc., Los Angeles, Calif.
Redi-Set—Sheet Metal Workers' Tools. Whitney Metal Tool Co., Rockford, Ill.
Regal—Roofing Cement, Roofing Felt. Johns-Manville, New York, N.Y.
Rego—Brazing Torches. National Cylinder Gas Co., Chicago, Ill.
Rego—Flux. Bastian-Blessing Co., Chicago, Ill.
Reillaloy—Stove and Furnace Repairs. Pittsburgh Furnace Parts Co., Pittsburgh, Pa.
Renovair—Odor Adsorbers. Boyle-Midway, Inc., New York, N. Y.
Renu-glas—Air Filters. American Air Filter Co., Inc., Louisville, Ky.
Repco—Furnaces. Republic Products Co., Philadelphia, Pa.
Republic—Induced Draft Blowers, Conversion Gas Burners, Incinerators, & Heat Savers. Auto-gas Co., Chicago, Ill.
Republic-Taylor—Terne Roofing Plates. Republic Steel Corp., Cleveland, Ohio.
Resiscote—Paint. Reilly Tar & Chemical Corp., Indianapolis, Ind.
Revolving—Ventilator. Accurate Sheet Metal & Mfg. Works, Chicago, Ill.
Revolving—Roof Ventilators. Burt Mfg. Co., Akron, Ohio
Rex—Bearings, Pillow Blocks, Blower-Filter Units, Blowers, Fan-Filter Units, Blower Wheels. Air Controls Inc., Cleveland, Ohio.
Rex—Bearings and Nozzles. Chain Belt Co., Milwaukee, Wis.
Rex—Controls, Draft Diverters, Water Heaters. Cleveland Heater Co., Cleveland, Ohio.
Rex—Roof Flashing. Simplex Mfg. Co., Fond du Lac, Wis.
Rex-Airate—Fans, Ventilators. Air Controls, Inc., Cleveland, Ohio.
Rex-Air-Pak—Blower Units. Air Controls, Inc., Cleveland, Ohio.
Rex-Flex—Flexible Duct Connectors, Flexible Metal Hose and Fittings. Flexonics Corp., Maywood, Ill.
Rex Junior—Welders. Rex Welder & Engineering Co., Kansas City, Mo.
Rex-Tube—Flexible Duct Connectors. Flexonics Corp., Maywood, Ill.
Rex-Weld—Flexible Duct Connectors. Flexonics Corp., Maywood, Ill.
Rex-Weld Unimetal—Flexible Hose. Flexonics Corp., Maywood, Ill.
Rexarc—Welding Electrodes, Welding Rods. Sight Feed Generator Co., West Alexandria, Ohio.
Rexco—Refractories. Rex-Roto Corp., Detroit, Mich.
Rexide—Metal Protecting Paint. A. C. Horn Co., Inc., Long Island City, N. Y.
Rexoil—Oil Burners and Furnaces. Reif-Rexoil, Inc., Buffalo, N. Y.
Rexwelders—Spot Welders. Rex Welder & Engineering Co., Kansas City, Mo.
Rezistal—Stainless Steels. Crucible Steel Co., Pittsburgh, Pa.
R & G—Grilles. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Rheotrol—Horizontal Oil Burners. Breese Burners, Inc., Chicago, Ill.
Rhinamel—Enamels. Tropical Paint & Oil Co., Cleveland, Ohio.
Rhino—Compounds, Paint. Pecora Paint Co., Philadelphia, Pa.
R & I—Furnace Cement and Insulation, Baffles, Combustion Chambers. Refractory & Insulation Corp., New York, N. Y.
Rid-All—Odor Adsorbers. Abbeon Supply Co., Jamaica, N.Y.
Rid All—Incinerators. Schwab Furnace Co., Milwaukee, Wis.
Ridgevent—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.
Ridgolator—Ridge Roof Ventilator. Klauer Mfg. Co., Dubuque, Iowa.
Rigid—Hack Saw Frames. Machine Rebuilding Co., Detroit, Mich.
Rigid-Tex—Metal Sheets. Rigidized Metals Corp., Buffalo, N. Y.
Rip-o-Lin—Enamels. Glidden Co., Cleveland, Ohio.
Rippl—Paint. Hilo Varnish Corp., Everett, Mass.
Ripple Fin—Coils. McQuay, Inc., Minneapolis, Minn.
Ripple Tube—Coils. McQuay, Inc., Minneapolis, Minn.
Rival—Conductor Straps. David Levow, New York, N. Y.
River Breeze—Exhausters and Fans. Kloppenborg Aluminum Fdry., Davenport, Iowa.
Rivnut—Blind Fasteners. B. F. Goodrich Co., Akron, Ohio.
R.I.W.—Paints and Waterproofing. Toch Bros., Inc., Staten Island, N. Y.
R. & M.—Motors. Robbins & Myers, Inc., Springfield, Ohio.
Robinson—Presses. New Albany Machine Mfg. Co., New Albany, Ind.

Robot—Thermostats. Miller-Harris Instrument Co., Milwaukee, Wis.
Rock Cork—Insulation. Johns-Manville, New York, N.Y.
Rollaire—Air Conditioning Furnaces. Hipoint Corp., Bellefontaine, Ohio.
Roof Flange—Flashing. Eagle-Picher Co., Cincinnati, Ohio.
Roofkoter—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.
Roofsaver—Roof Cement. Baer Brothers, New York, N. Y.
Rotary—Ventilators. Swartwout Co., Cleveland, Ohio.
Roto—Insulating Cement and Combustion Chambers. Rex-Roto Corp., Detroit, Mich.
Roto-Clone—Dust Collectors. American Air Filter Co., Inc., Louisville, Ky.
Rotoflame—Oil Burners. Oil Equipment Laboratories, Inc., Elizabeth, N. J.
Rotojet—Nozzles. Binks Mfg. Co., Chicago, Ill.
Roxaprene—Enamels and Lacquers. Roxaline Flexible Finishes, Inc., Elizabeth, N. J.
Royal—Furnaces. Hart & Crouse Corp., Oneida, N. Y.
Royal—Furnaces and Space Heaters. Chattanooga Implement & Mfg. Co., Chattanooga, Tenn.
Royal—Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Royal Blue—Acid and Furnace Brushes. Schaefer Brush Mfg. Co., Milwaukee, Wis.
Royal Clipper—Metal Cutter. Merchandising and Manufacturing Associates, Inc., Lancaster, Pa.
Royalastic—Roof Cement. A. Wilhelm Co., Reading, Pa.
RP—Dust & Grease Filters. Research Products Corp., Madison, Wis.
RPM—Steel Sheets and Roofing. H. H. Robertson Co., Pittsburgh, Pa.
R-R-M—Hygrometers, Psychrometers, Thermometers. Palmer Thermometers, Inc., Cincinnati, Ohio.
Rubalt—Paints. Alfred Hague & Co., Brooklyn, N. Y.
Rubber-in-Shear—Vibration Isolating Pads. Korfund Co., Long Island City, N. Y.
Rubyfluid—Solder, Soldering Flux, Ruby Chemical Co., Columbus, Ohio.
R-U-F—Fans. Reed Unit-Fans, Inc., New Orleans, La.
Rusco—Windows. F. C. Russell Co., Cleveland, Ohio.
Rust Bloc No. 20—Coating. Turco Products, Inc., Washington, D. C.
Rust Sol—Metal Cleaner. Klem Chemicals, Inc., Dearborn, Mich.
Rustnil—Paints. National Engineering Products, Inc., Washington, D. C.
Rustrem—Aluminum Paint. Speco, Inc., Cleveland, Ohio.
Rysdon—Ventilators. Sioux Steel Co., Sioux Falls, S. D.
Rystrom—Fuel Oil Pumps. Polo Pump Co., Polo, Ill.

S

Saf-Aire—Furnaces. Stewart-Warner Corp., South Wind Div., Indianapolis, Ind.
Safe-Hi—Ladder Shoes. Rose Mfg. Co., Denver, Colo.
Safety Circle—Motors. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
St. Clair—Circulating Heaters. Enterprise Foundry, Inc., Belleville, Ill.
St. Louis—Stoker. Ormsby-Osterman Co., St. Louis, Mo.
Sal-Mo—Cement, Insulation, Pipe Coverings. Sall Mountain Co., Hamilton, Ohio.
Salamander—Roofing Felt. Johns-Manville, New York, N.Y.
Samco—Cement. Standard Asbestos Mfg. Co., Chicago, Ill.
Samco—Floor Furnaces and Space Heaters. Samuel Stamping & Enameling Co., Chattanooga, Tenn.
Sampson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Sav-A-Tank—Rust Preventive. Sudbury Laboratory, South Sudbury, Mass.
Sav-Haf—Oil Burners. Breeze Corps., Inc., Newark, N. J.
Saw Gun—Portable Hack Saw. Mid-States Welder Mfg. Co., Chicago, Ill.
Sax—Oil Burners. Aldrich Co., Wyoming, Ill.
SC—Furnaces, Heaters. Surface Combustion Corp., Toledo, Ohio.
Schild-Bilt—Attic Fans. Fresh Air Circulator Co., Houston, Tex.
Schmidt—Soldering Coppers, Soldering and Brazing Torches. Minn-Kota Foundry & Mfg. Co., Fargo, N. D.
Sco-Co—Roof Cement, Caulking Compounds, Paint, Waterproofing. Southport Paint Co., Savannah, Ga.
Scotch Brand—Duct Insulation. Minnesota Mining & Mfg. Co., St. Paul, Minn.
Screw-Tite—Nails. Independent Nail & Packing Co., Bridgewater, Mass.
Scribus-Dividus—Scribers, Dividers, Calipers, Wiggler. Nork Products Co., Los Angeles, Calif.
Scrugun—Automatic Screw Driver. Black & Decker Mfg. Co., Towson, Md.
S.D.T. Freeze Proof—Coils. John J. Nesbitt, Inc., Philadelphia, Pa.
S-E—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Sea Lion—Leather Belting. Chicago Belting Co., Chicago, Ill.
Seal Master—Bearings. Stephens-Adamson Mfg. Co., Aurora, Ill.
Seal of Quality—Roofing. Columbia-Geneva Steel, Div. United States Steel Corp., San Francisco, Calif.
Seal-Tite—Registers. Char-Gale Mfg. Co., Minneapolis, Minn.
Sealap—Roofing Cement. Johns-Manville, New York, N.Y.
Sealtight—Roof Cement, Caulking Compounds, Roofing Felt, Flashings. W. R. Meadows, Inc., Elgin, Ill.
Seasonmaker—Air Conditioning Units, Evaporative Coolers. McQuay, Inc., Minneapolis, Minn.
Security—Caulking Compounds and Felt Roofing. National Mfg. Corp., Tonawanda, N. Y.
Security—Furnaces, Water Heaters. Rasch Mfg. Corp., Kansas City, Mo.
Selectair—Air Conditioning Units and Oil Furnaces. S. T. Johnson Co., Oakland, Calif.
Selectric—Storage Water Heaters. Bastian-Morley Co., Inc., LaPorte, Ind.
Sells—Bearings. Royersford Foundry & Machine Co., Royersford, Pa.
Semco—Sheet Metal Working Machines. Service Machine Co., Inc., Elizabeth, N.J.
Sensatherm—Thermostats. Mercoid Corp., Chicago, Ill.
Sensitrol—Electrical Relays. Weston Electrical Instrument Corp., Newark, N. J.
Sentinel—Water Heaters. General Water Heater Corp., Burbank, Calif.
Sentry—Barometric Dampers, Tank Gauges. Krueger Sentry Gauge Co., Green Bay, Wis.
Service-Master—Truck Bodies. McCabe Powers Auto Body Co., St. Louis, Mo.
Service-Twins—Truck Bodies. McCabe Powers Auto Body Co., St. Louis, Mo.
Sette—Fuel Oil Filters. Marquart Mfg. Co., Oakland, Calif.
SGP—Gas Conversion Burners. Security Mfg. Co., Kansas City, Mo.
Shallo-Well—Floor Furnace. Oran Co., Columbus, Ohio.
Shawburnize—Gas Conversion Burners. Central States Mfg. Co., Inc., Arkansas City, Kansas.
Shelby—Tubing. National Tube Div., U. S. Steel Corp., Pittsburgh, Pa.
Shelhed—Oil Burners. Metromatic Mfg. Co., Everett, Mass.
Shield-Arc—Welding Rod, Welders. Lincoln Electric Co., Cleveland, Ohio.
Shipley—Air Conditioning Units. York-Shipley, Inc., York, Pa.
Shock Absorbing—Pillow Blocks. Triangle Mfg. Co., Oshkosh, Wis.
Shorty—Furnaces. John Zink Co., Tulsa, Okla.
Shower-Proof—Paint. Calbar Paint & Varnish Co., Philadelphia, Pa.
Shut-O-Vent—Louvers and Shutters. Reed Unit-Fans, Inc., New Orleans, La.
Sierra Air—Evaporative Coolers. International Sales Co., San Francisco, Calif.
Sievert—Soldering Furnaces and Torches. J. A. Sanders, Fulton, N. Y.
Sil-Flux—Flux. United Wire & Supply Corp., Providence, R. I.
Sil-Fos—Solder. Handy & Harman, New York, N. Y.
Silaflex—Insulation. Johns-Manville, New York, N.Y.
Silbond—Electrodes. Universal Welder Corp., Cleveland, Ohio.
Silent—Blowers. Air Conditioning Equipment Co., Minneapolis, Minn.
Silent Duct—Flexible Duct Connections. Elgen Mfg. Corp., Long Island City, N.Y.
Silent-glow—Oil Burners. Caloroil Burners Corp., Hartford, Conn.
Silent Korth—Oil Burners. Eckhart Mfg. Co., Inc., Union, N. J.
Silent Star—Oil Burners. Mechanical Products Co., Seattle, Wash.
Silentblu—Gas Burners. Beck Engineering Combustion Kompany, St. Louis, Mo.
Silentvane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Silicon Bronze—Bolts. Chase Brass & Copper Co., Inc., Waterbury, Conn.
Siloo—Fuel Oil Tank Solvent. Petroleum Solvents Corp., New York, N. Y.
Siloy-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
Silver-Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.
Silver Steel—Band Saw and Hack Saw Blades. E. C. Atkins & Co., Indianapolis, Ind.
Simplex—Flashing. Keystone Flashing Co., Philadelphia, Pa.
Sim-trol—Barometric Dampers. Simplex Mfg. Co., Fond du Lac, Wis.
Single-Ten—Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Sioux—Drills, Grinders, Sanders. Albertson & Co., Inc., Sioux City, Iowa.
Sirocco—Blowers, Washers. American Blower Corp., Detroit, Mich.
S. I. S.—Cement. Barrett Div., Allied Chemical & Dye Corp., New York, N. Y.
Sisalation—Reflective Insulation. Sisalkraft Co., Chicago, Ill.
Skymaster—Roof Ventilators. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
S-L—Bar Folders, Nibblers, Slitting Machines. St. Louis Tool Co., St. Louis, Mo.

Slatekote—Roofing Felt. Johns-Manville, New York, N.Y.

Slo-Speed—Motors. Sterling Electric Motors, Inc., Los Angeles, Calif.

Smith's—Cleat Benders. R. E. Smith, Waukegan, Ill.

Smithway—Water Storage Heaters, Stokers, Welders. A. O. Smith Corp., Milwaukee, Wis.

Smithway-Burkay—Gas Conversion Burners. A. O. Smith Corp., Toledo, Ohio.

Smoothlite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.

S-N—Furnaces, Oil Burners. Scott-Newcomb, Inc., Cleveland, O.

Snap Action—Humidifier Valves. McDonnell & Miller, Inc., Chicago, Ill.

Snap-Lock—Clamp Pliers. Seymour Smith & Son, Inc., Oakville, Conn.

Snap-On—Gutter Guards. Lockhart Mfg. Corp., Detroit, Mich.

Snap-Rite—Ducts, Pipe and Fittings. Gray Metal Products, Inc., Rochester, N. Y.

Snaplok—Furnace Pipe. Reeves Steel & Mfg. Co., Dover, Ohio.

Snaptite—Gutter Fittings. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.

Sno-Breze—Evaporative Coolers. Palmer Mfg. Corp., Phoenix, Ariz.

Sno-Fluf—Evaporative Cooler Mats. Palmer Mfg. Corp., Phoenix, Ariz.

So Salts—Flux. Turco Products, Inc., Los Angeles, Calif.

Soder—Solder. L. B. Allen Co., Inc., Chicago, Ill.

Sod-R-Braze—Soldering Torches. National Cylinder Gas Co., Chicago, Ill.

Sol-Flux—Soldering Flux. Klem Chemical Works, Dearborn, Mich.

Sola-Flame—Oil Burners. East Coast Co., Boston, Mass.

Solar Flame—Oil Burners. United States Radiator Corp., Detroit, Mich.

Solaraire—Air Conditioning Furnace. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Solder-Matic—Soldering Iron Attachment. Nelpin Mfg. Co., Long Island City, N. Y.

Solderprep—Flux for Steel. Neilson Chemical Co., Detroit, Mich.

Solex—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Sonoairduct—Non-metallic Ducts. Sonoco Products Co., Construction Products Div., Hartsville, S. C.

Sonoairduct-XP—Non-metallic Ducts. Sonoco Products Co., Construction Products Div., Hartsville, S. C.

Sonolastic—Asphalt Paint. L. Sonneborn Sons, Inc., New York, N. Y.

Soot Destroyer—Soot Removers. Sid Harvey, Inc., Valley Stream, N.Y.

Soot Master—Furnace Vacuum Cleaners. Master-Craft Supply Co., Inc., Haverstraw, N.Y.

Sootracide—Soot Remover. Metropolitan Refining Co., Inc., Long Island City, N. Y.

Soroco—Chimney Caps and Tops. Southbridge Roofing Co., Inc., Southbridge, Mass.

Southaire—Pipe Fittings, Stokers, Furnaces. E. E. Souther Iron Co., St. Louis, Mo.

Southern-Aire—Space Heaters. Southern Aircraft Co., Garland, Tex.

Spacesaver—Suspended Furnaces. Payne Furnace Div., Affiliated Gas Equipment Inc., Monrovia, Calif.

Spartan—Water Heaters. Continental Water Heater Co., Ltd., Los Angeles, Calif.

Special X—Flux. Industrial Service Laboratories, Milwaukee, Wis.

Speco—Soldering Flux. Pfanstiehl Chemical Co., Waukegan, Ill.

Speed Clamps—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed Clips—Spring Steel Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed Grips—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed-heat—Furnaces. Marshall Furnace Co., Marshall, Mich.

Speed Nuts—Sheet Metal Fastenings. Tinnerman Products, Inc., Cleveland, Ohio.

Speed-Trol—Transmissions, Motors, Sterling Electric Motors, Inc., Los Angeles, Calif.

Speedmaster—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.

Speedomax—Recorders. Leeds & Northrup Co., Philadelphia, Pa.

Speedweld—Welding Electrodes. Trindl Products, Ltd., Chicago, Ill.

Sphinx—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.

Sphinxette—Gas Burners and Furnaces. C. L. Bryant Corp., Cleveland, Ohio.

Spinner—Ventilators. Inland Steel Products Co., Milwaukee, Wis.

Spintex—Insulation. Johns-Manville, New York, N.Y.

Spiralok—Pulleys. Scientiae Tool Co., Dayton, Ohio.

Spiratube—Flexible Duct Connections and Non-Metallic Fittings. Flexible Tubing Corp., Guilford, Conn.

Spirovane—Fans. Western Blower Co., Seattle, Wash.

Spongex—Vibration Isolating Pads, Seals for Registers. Sponge Rubber Products Co., Shelton, Conn.

Spot-Aire—Room Type Air Conditioning Units. Drayer-Hanson, Inc., Los Angeles, Calif.

Spra-Rite—Nozzles. Binks Mfg. Co., Chicago, Ill.

Spraco—Spray Guns, Humidifiers, Nozzles, Air Washers. Spray Engineering Co., Somerville, Mass.

Sprague—Furnaces. Katelman Foundry & Mfg. Co., Council Bluffs, Iowa.

Spray-Acoustic—Insulation. Sprayo-Flake Co., Chicago, Ill.

Spray-Cote—Insulation. Sprayo-Flake Company, Chicago, Ill.

Sprayit—Paint Guns. Electric Sprayit Co., Sheboygan, Wis.

Spraymaster—Paint Spray Guns. Portable Electric Tools, Inc., Chicago, Ill.

Spraywelder—Metal Spray Guns. Wall Colmonoy Corp., Detroit, Mich.

Spray Wheel—Evaporative Coolers. Mountain States Equipment Co., Denver, Colo.

Springin—Toggle Bolts. Star Expansion Bolt Co., New York, N. Y.

Spunsteel—Pulleys. Spun Steel Corporation, Canton, Ohio.

S.R.P. 75—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.

S.R.P. 87—Sheet Metal Paint. L. Sonneborn Sons, Inc., New York, N. Y.

Ssirco—Ridge Roll, Roofing, Metal Shingles and Tile. Southern States Iron Roofing Co., Savannah, Ga.

ST-type—Gas Burner Pilots. John Zink Co., Tulsa, Okla.

Sta-Lok—Prefabricated Ducts and Duct Fittings. Chicago Furnace Supply Co., Chicago, Ill.

Sta-Steel—Soldering Flux. London Chemical Co., Chicago, Ill.

Stable-Arc—Welding Rod. Lincoln Electric Co., Cleveland, Ohio.

Stack-O-Meter—CO_2 Analyzer. Davis Emergency Equipment Co., Newark, N. J.

Stackmaster—Furnace Regulator. Campbell Eng. Co., Appleton, Wis.

Stainless 20—Stainless Clad Sheets. Lukens Steel Co., Coatesville, Pa.

Stamco—Furnace Pipe, Fittings. Cincinnati Stamping & Furnace Co., Cincinnati, Ohio.

Standard—Roof Ventilators. Burt Mfg. Co., Akron, Ohio.

Standard—Furnace. Farris Furnace Co., Springfield, Ill.

Standard—Furnaces. Home Furnace Co., Holland, Mich.

Standard—Furnaces. Williamson Heater Co., Cincinnati, Ohio.

Standard I.F.B.—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Standard Stationary—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Standforated—Grilles. Standard Stamping & Perforating Co., Chicago, Ill.

Stanflame—Gas Burners, Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.

Star—Hack Saw Blades. Clemson Bros., Inc., Middletown, N. Y.

Star—Oil Burners. Mechanical Products Co., Seattle, Wash.

Stark—Furnaces. Hess-Snyder Co., Massillon, Ohio.

Statick—Ventilators. Hirschmann-Pohle Co., Inc., LeRoy, N. Y.

Staxausters—Ventilators. Allen Ventilator Div., Production Planning Co., Rochester, Mich.

Staynew—Air Filters. Dollinger Corp., Rochester, N. Y.

Steel Cable—V-Belts. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Steel City—Furnaces. Ruby Management Co., Pittsburgh, Pa.

Steel-Fin—Heating Coils. New York Blower Co., Chicago, Ill.

Steelco—Gutter Guards. Steele Mfg. Co., Ashland, Ky.

Steelfab—Squaring Shears & Presses. Highland Engineering Co., Santa Monica, Calif.

Steelweld—Sheet Metal Working Machinery. Cleveland Crane & Engineering Co., Wickliffe, Ohio.

Sterling—Evaporative Coolers and Compressors. Reynolds Mfg. Co., Springfield, Mo.

Sterling Beader—Beading Machines. F. L. Robertson, Buffalo, N. Y.

Steward—Brakes, Benders. Ward Machinery Co., Chicago, Ill.

Stic-Tite—Cement. Refractory & Insulation Corp., New York, N. Y.

Stok-A-Timer—Stoker Controls. Mercoid Corp., Chicago, Ill.

Stoker-Disk—Baffles. Insulation & Refractories Co., Williamson, N. Y.

Stokerator—Domestic Stokers. Northern Steel & Stoker Corp., Peoria, Ill.

Stokerelay—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.

Stokerett—Domestic Stokers. Worsham Co., Inc., Long Beach, Calif.

Stokol-Hydraulic—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.

Stokol-Mercury—Stokers. Stokol Stoker Co., Inc., Dayton, Ohio.

Stonewall—Asbestos-Cement Board. Ruberoid Co., New York, N. Y.

Stop-It—Waterproofing. Tamms Industries Inc., Chicago, Ill.

Storm-Pruf—Oil Burner Vent Caps. Bearlee Products Co., Green Bay, Wis.

Stormseal—Sheet Metal Roofing. American Steel & Wire Co., Cleveland, Ohio; Columbia-Geneva Steel, Div. United States Steel Corp., San Francisco, Calif.; U. S. Steel Co., Pittsburgh, Pa.

Stormtight—Roof Cement and Paint. L. Sonneborn Sons, Inc., New York, N. Y.

Stowaway—Suspended Furnaces. Lennox Furnace Co., Marshalltown, Iowa.

Straight Edge—Duct and Duct Fittings. Cross & Currier Mfg. Co., Inc., Claremont, N. H.

Strato Cap—Roof Ventilators. Ryniker Steel Products Co., Billings, Mont.

Strato-Liminator—Air Diffusers. Wilster, Inc., Cleveland, Ohio.

Streamjet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.

Streamline—Ridge Ventilators. H. H. Robertson Co., Pittsburgh, Pa.

Streamline—Copper Tubing and Fittings. Mueller Brass Co., Port Huron, Mich.

Streamlined—Combustion Chambers. A. P. Green Fire Brick Co., Mexico, Mo.

Streamliner—Directional Flow Registers. Auer Register Co., Cleveland, Ohio.

Streekno—Register Packing. Excel Heating & Air Conditioning Co., Chicago, Ill.

Strongbarn—Corrugated Steel Roofing. Granite City Steel Co., Granite City, Ill.

Stronghold—Nails. Independent Nail & Packing Co., Bridgewater, Mass.

Stubby—Floor Furnace. Holly Mfg. Co., Pasadena, Calif.

Stud-Pak—Insulation. United States Mineral Wool Co., Stanhope, N. J.

Sturdybender—Presses, Brakes. Cyril Bath & Co., Cleveland, Ohio.

Styx—Roof Cement. Coopers Creek Chemical Corp., West Conshohocken, Pa.

Sue-Per—Water Heaters. Southwestern Heater Corp., Dallas, Texas.

Sun-Burst—Furnaces. Delta Heating Corp., Trenton, N. J.

Sun Fuel Master—Furnaces. J. V. Patten Co., Sycamore, Ill.

Super—Drill Grinders. Crandall Mfg. Co., Los Angeles, Calif.

Super—Hangers and Fittings. Royal-Apex Mfg. Co., Inc., Brooklyn, N. Y.

Super—Heaters. Evans Products Co., Detroit, Mich.

Super—Plastic Furnace Lining. Walsh Refractories Corp., St. Louis, Mo.

Super Cycle—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.

Super Firma—Gravity Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.

Super-Flo—Fans. John Zink Co., Tulsa, Okla.

Super-Jet—Soldering Torches. Fusion Engineering, Cleveland, Ohio.

Super-Por-Seal—Waterproofing. Truscon Laboratories, Detroit, Mich.

Super Red Streak—Furnace Cleaners. National Super Service Co., Inc., Toledo, Ohio.

Super Saw—Power Saws. RCS Tool Sales Corp., Joliet, Ill.

Super Sioux—Ventilators. Sioux Steel Co., Sioux Falls, S. D.

Super 66—Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Super Slugger—Electric Power Hammers. Noble & Stanton, Inc., Bedford, Ohio.

Super Speed—Mouldings and Trim. Appleton Supply Co., Inc., Appleton, Wis.

Super-Spred—Stokers. Wm. Bros Boiler & Mfg. Co., Minneapolis, Minn.

Super Steel—Furnaces. Williamson Heater Co., Cincinnati, Ohio.

Super T—Controls. Tork Clock Co., Inc., Mt. Vernon, N. Y.

Super-Thermo Stucco—Combustion Chambers Refractories. Chicago Fire Brick Co., Chicago, Ill.

SuperTwist—Dust Recovery Bags. Master-Craft Supply Co., Inc., Haverstraw, N. Y.

Super-Vacuum—Roof Ventilators. Octagon Ventilator Co., Chicago, Ill.

Super X—Sheets. Western Brass Mills Div., Olin Industries, Inc., East Alton, Ill.

Superair—Air Conditioning Furnaces. St. Louis Furnace Mfg. Co., St. Louis, Mo.

Superdraft—Blowers. Perfection Stove Co., Cleveland, Ohio.

Superfelt—Insulation. Johns-Manville, New York, N. Y.

Superfin—Furnaces and Unit Heaters. American Fdry. & Furnace Co., Bloomington, Ill.

Superflame—Blowers, Gas Burners, Space Heaters and Furnaces. Queen Stove Works, Inc., Albert Lea, Minn.

Superflux—Soldering Flux. Paul-Lewis Laboratories, Inc., Milwaukee, Wis.

Superhot—Water Heaters. SuperbO Mfg. Co., Los Angeles, Calif.

Superior—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.

Superior—Blowers. American Foundry & Furnace Co., Bloomington, Ill.

Superior—Storage Water Heaters. Bastian-Morley, Inc., LaPorte, Ind.

Superior—Water Heaters. Crane Co., Chicago, Ill.

Supermetic—Compressors. Servel, Inc., Evansville, Ind.

Supertemp—Insulation. Eagle-Picher Co., Cincinnati, Ohio.

Supreme—Combustion Chambers. Sandberg Mfg. Co., Portland, Ore.

Supreme—Enamels. Blue Ridge Talc Co., Inc., Henry, Va.

Supreme—Furnaces, Heaters. Agricola Furnace Co., Inc., Gadsden, Ala.

Supreme—Space Heaters. Independence Stove & Mfg. Co., Independence, Mo.

Supreme—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.

Sure Draft—Chimney Tops. H. C. Little Burner Co., Inc., San Rafael, Calif.

Sure-Foot—Ladder Base. Akron Steel Sales, Inc., Akron, Ohio.

Surefit—Ducts, Fittings, Furnace and Smoke Pipe, and Fittings. Henry Furnace Co., Medina, Ohio.

Surety—Roofing Felt. Philip Carey Mfg. Co., Cincinnati, Ohio.

Sureweld—Welding Electrodes, Welders. National Cylinder Gas Co., Chicago, Ill.

SuVeneer—Clad Sheets. Superior Steel Corp., Pittsburgh, Pa.

Swanee—Galvanized Shingles. Berger Mfg. Div., Republic Steel Corp., Canton, Ohio.

Swingburner—Oil Burners. Swingfire Div., Devenco, Inc., New York, N. Y.

Sylphon—Thermostats. Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Knoxville, Tenn.

Symentrex—Waterproofing. A. C. Horn Co., Inc., Long Island City, N. Y.

Symonds—Registers. Front Rank Furnace Co., Div., Liberty Foundry Co., St. Louis, Mo.

Synchron—Stoker Controls, Relays, Switches. Industrial Engineering Corp., Terre Haute, Ind.

Syncrogear—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.

T

Table-Top—Water Heaters. Handley-Brown Heater Co., Jackson, Mich.

Tag—Controls, Hygrometers, Recorders, Psychrometers, Thermometers. Weston Electrical Instrument Corp., Newark, N. Y.

Tam-Putty—Caulking Compound. Tamms Industries Inc., Chicago, Ill.

Tamanite—Metal Conditioner. Tamms Industries Inc., Chicago, Ill.

Tamco—Ventilators. Tiffin Art Metal Co., Tiffin, Ohio.

Tamtex—Paint. Tamms Industries Inc., Chicago, Ill.

Tank-Kleen—Solvent. Celco Corp., New York, N. Y.

Tank-O-Meter—Gauges. Uehling Instrument Co., Paterson, N. J.

Taperlock—Fan & Motor Pulleys. Dodge Mfg. Corp., Mishawaka, Ind.

Tapgun—Portable Electric Tapper. Black & Decker Mfg. Co., Towson, Md.

Tarbestos—Roofing Paint. Philip Carey Mfg. Co., Cincinnati, Ohio.

Teejet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.

Tee Joint—Pipe Fittings and Accessories. Inland Steel Products Co., Milwaukee, Wis.

Teg Conditioner—Blower-Filter Units. National Air Conditioning, Inc., Johnstown, Pa.

Teletrol—Controls. Airgard Mfg. Co., Chicago, Ill.

Tel-Tru—Psychrometers, Thermometers, Air Testing Instruments. E. Vernon Hill & Co., Lake Geneva, Wis.

Tem-Clock—Clock Thermostats. Penn Controls, Inc., Goshen, Ind.

Temlok—Insulation. Armstrong Cork Co., Lancaster, Pa.

Temp-R-Izer—Gas Burners. LaHarco Industries, Minneapolis, Minn.

Tempmaster—Thermostats. Crown Controls Co., Inc., New Bremen, Ohio.

Tempoint—Thermometer. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Tempotool—Powder Operated Drills. Tempo Products Co., Cleveland, Ohio.

Tempscribe—Portable Temperature Recorder. Bacharach Industrial Instrument Co., Pittsburgh, Pa.

Tenneseal—Sheet Metal Roofing. Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.

Tension-Lap—Roofing Steel. Inland Steel Co., Chicago, Ill.

Tensulate—Insulation, Tennessee Products & Chemical Corp., Nashville, Tenn.

TePee—Burners, Furnaces, Water Heaters. Thermo-Products, Inc., North Judson, Ind.

Tergitol—Cleaning Compounds. Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., New York, N. Y.

Texamo—Refractories. A. P. Green Fire Brick Co., Mexico, Mo.

Texan—Water Heaters. Hotstream Heater Co., Cleveland, Ohio.

Texrope—V-Belts. Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Tharco—Furnace Cement. The Armstrong Co., Chicago, Ill.

Thawzone—Dehydrators. Highside Chemicals Co., Clifton, N. J.

Therm-A-Neered—Controls. Westinghouse Electric Corp., Pittsburgh, Pa.

Thermaflex—Non-metallic Duct Fittings. Flexible Tubing Corp., Guilford, Conn.

Thermalfuel—Furnaces. Beck Engineering Combustion Co., St. Louis, Mo.

Thermalite—Paint. Tropical Paint & Oil Co., Cleveland, Ohio.

Thermaload—Electrical Relays. Monitor Controller Co., Boston, Mass.

Thermaster—Furnaces. Thatcher Furnace Co., Garwood, N. J.
Thermatube—Duct Fittings. Flexible Tubing Corp., Guilford, Conn.
Thermidaire—Air Conditioning Units, Blowers, Fans, Furnaces, Louvres & Shutters. E. K. Campbell Co., Kansas City, Mo.
Thermo—Furnaces. American Furnace Co., St. Louis, Mo.
Therm-o-glo—Insulating Cement. National Fuel Conservation Co., Inc., White Plains, N. Y.
Thermo-Base—Baseboard Diffusers. Gerwin Industries, Thermo-Base Div., Michigan City, Ind.
Thermo-Drip—Humidifier. Automatic Humidifier Co., Cedar Falls, Iowa.
Thermo-Grip—Soldering Coppers. Ideal Industries, Inc., Sycamore, Ill.
Thermo-Humidigraph—Humidity Recorders. Bristol Co., Waterbury, Conn.
Therm-otrol—Thermometers. Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
Thermo Lo—Brazing Flux. Farrelloy Co., Philadelphia, Pa.
Thermoanemometer—Anemometer, Willson Products, Inc., Reading, Pa.
Thermobloc—Furnaces. Prat-Daniel Corp., South Norwalk, Conn.
Thermodulor—Controls. Carvell Heat Equipment Co., Los Angeles, Calif.
Thermogas—Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.
Thermoil—Furnaces. Beck Engineering Combustion Kompany, St. Louis, Mo.
Thermoil-Granodine—Coating Chemical for Steel or Iron Surfaces. American Chemical Paint Co., Ambler, Pa.
Thermolux—Water Heaters. Los Angeles Gas Appliance Co., Los Angeles, Calif.
Thermopane—Windows. Libby-Owens-Ford Glass Co., Toledo, Ohio.
Thermopilot—Controls. General Controls Co., Glendale, Calif.
Thermoseal—Insulating Windows. F. C. Russell Co., Cleveland, Ohio.
Thermotex B—Insulating Cement, Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
Thermotite—Insulation. Coast Insulating Products, Los Angeles, Calif.
Thin-Man—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Thorobred—V Belts. Dayton Rubber Co., Dayton, O.
3-M—Electric Grinders, Buffers, etc. Minnesota Mining & Mfg., Co., St. Paul, Minn.
Three-Phase—Welders. Sciaky Bros., Chicago, Ill.
370 Special—Paints. Thompson & Co., Oakmont, Pa.
Thrift—Time Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.
Thulman—Prefabricated Chimneys. Chimney Sales Corp., Fredericksburg, Va.
Thunder-Core—Hammer bits. New England Carbide Tool Co., Cambridge, Mass.
Thunder-Twist—Carbide Tipped Bits, Chuck Wrenches. New England Carbide Tool Co., Cambridge, Mass.
Ti-Co—Sheets. Inland Steel Co., Chicago, Ill.
Ti-Namel—Vitreous Enameling Alloy Steel Sheets. Inland Steel Co., Chicago, Ill.
Tik Wheat—Pipe Covering Paste. Clark Stek-O Corp., Rochester, N. Y.
Tillery's—Furnace Clock. Little Janitor Furnace Clock Co., New York, N. Y.
Time-O-Switch—Time Switches. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Timercoid—Time Switches. Mercoid Corp., Chicago, Ill.
Timerelay—Relays. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Tinezy—Solder. Farrelloy Co., Inc., Philadelphia, Pa.
Tinner's Red—Paint. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Tinol—Soldering Flux. American Solder & Flux Co., Philadelphia, Pa.
Tite-Lite—Caulking Compound. Truscon Laboratories, Detroit, Mich.
Titelock—Fittings and Accessories for Conductor, Gutter, Furnace Pipe. Inland Steel Products Co., Milwaukee, Wis.
Toastmaster—Electric Water Heaters. McGraw Electric Co., Clark Div., Chicago, Ill.
Tobin Bronze—Plates and Welding Rod. American Brass Co., New York, N. Y.
Tocoseal—Roof Cement. Tropical Paint & Oil Co., Cleveland, Ohio.
Toledo—Presses and Dies. E. W. Bliss Company, Canton, Ohio.
Tool Line—Grinders. Brown-Brockmeyer Co., Inc., Dayton, O.
Topseal—Sheet Metal Fastenings. Fabricated Products Co., West Newton, Pa.
Torchweld—Torches. National Cylinder Gas Co., Chicago, Ill.
Toridaire—Furnaces. Fraser and Johnston Co., San Francisco, Calif.
Toridmaster—Conversion Burners. Modern Controls Corporation, Centerline, Mich.
Torkmaster—Switches. Tork Clock Co., Inc., Mt. Vernon, N. Y.
Torkotherm—Thermostats. Tork Clock Co., Inc., Mt. Vernon, N. Y.
Tornado—Furnace Vacuum Cleaners. Breuer Electric Mfg. Co., Chicago, Ill.
Torrid—Soldering Furnaces. J. D. Polis Mfg. Co., Chicago, Ill.
Torrid Zone—Furnaces. Lennox Furnace Co., Marshalltown, Iowa.
Totalume—Aluminum Paint. Wilbur & Williams Co., Brighton, Mass.
Totrust—Paints, Enamels. Wilbur & Williams Co., Brighton, Mass.
Town & Country—Air Conditioning Units, Furnaces. Conco Engineering Works, Mendota, Ill.
Trace—Leak Detectors. Highside Chemicals Co., Clifton, N. J.
Tramrail—Hoists, Monorails. Cleveland Crane & Engineering Co., Wickliffe, Ohio.
Transite—Asbestos Cement Board, Pipe and Fittings. Johns-Manville, New York, N. Y.
Transite Conduit—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.
Transite Korduct—Ducts and Duct Fittings. Johns-Manville, New York, N. Y.
Transitop—Non-Metallic Sheets. Johns-Manville, New York, N. Y.
Transparent—CO_2 Analyzers. F. W. Dwyer Mfg. Co., Chicago, Ill.
Trapit—Fuel Oil Filters. A-P Controls Corp., Milwaukee, Wis.
Trentweld—Steel Tubing. Crucible Steel Co., Pittsburgh, Pa.
Tri-Core—Solder. Alpha Metals, Inc., Jersey City, N. J.
Tri-Flex—Grilles, Registers. Tuttle & Bailey, Inc., New Britain, Conn.
Tri-Flux—Soldering Flux. Wolfe-Kote Co., Sheboygan, Wis.
Tri-Snips—Multi-purpose Snips. Roto-Table Co., Dayton, Ohio.
Triangle—Water Heaters. Day & Night Div., Affiliated Gas Equipment Co., Inc., Monrovia, Calif.
Tribloc—Hoists. Ford Chain Block Div., American Chain and Cable Co., Inc., York, Penn.
Triclene—Metal Cleaner. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Trico—Draft Diverters, Furnaces. Tri-State Heating Supply Inc., Fort Wayne, Ind.
Trimatic—Gas Burner Pilots. Lowell & Grayson Mfg. Co., Monrovia, Calif. Appleton, Wis.
Tripl-Lock—Roofing Nails. The Deniston Co., Chicago, Ill.
Tripl-ife—Furnaces. Williamson Heater Co., Cincinnati, Ohio.
Triple A—Paints. Quigley Co., Inc., New York, N. Y.
Triple-Lok—Copper Tube Fittings. Parker Appliance Co., Cleveland, Ohio.
Triumph—Space Heaters. Independence Stove & Mfg. Co., Independence, Mo.
Triumph—Water Heaters. Koil-Les Heater Co., Geneva, Ill.
Tro-Laire—Wall Furnaces. San Carlos Mfg. Co., San Carlos, Calif.
Tropicalk—Caulking Compounds. Tropical Paint & Oil Co., Cleveland, Ohio.
Tropic Breeze—Furnaces. Dalzen Mfg. Co., St. Clair, Mich.
Truflex—V Belts. Gates Rubber Co., Denver, Colo.
Truflex—Solder. General Plate Div., Metals & Controls Corp., Attleboro, Mass.
Truliradiant—Gas Burners. Sullivan Valve & Engineering Co., Butte, Mont.
Trunkline—Ducts and Duct Fittings. Norwalk Air Conditioning Corp., South Norwalk, Conn.
Truscon—Metal Windows. Republic Steel Corp., Cleveland, O.
Trussteel—Damper Clips. U. S. Register Co., Battle Creek, Mich.
Tub-Tite—Caulking Compound. American Fluresit Co., Inc., Cincinnati, O.
Tube-O-Flux—Flux, Solder. American Products Corp., Chicago, Ill.
Tuf-Flex—Hack Saw Blades. Millers Falls Co., Greenfield, Mass.
Tungsweld—Shear Baldes. Simonds Saw & Steel Co., Fitchburg, Mass.
Turbine Rotary—Ventilators. Western Engineering & Manufacturing Co., Los Angeles, Calif.
Turbo—Air Washers. Bayley Blower Company, Milwaukee, Wis.
Turbovane—Blowers. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Twin Contact—Controls. Perfex Corp., Milwaukee, Wis.
Twin-Eight—Space Heaters. Allen Mfg. Co., Inc., Nashville, Tenn.
Twin-Fyr—Oil Burner. Breeze Corps., Inc., Newark, N. J.
Twin Rail—Fan and Motor Base. Korfund Co., Inc., Long Island City, N. Y.
Twindow—Heat Insulating Windows. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Two-Drain—Steel Roofing. Inland Steel Products Co., Milwaukee, Wis.
Two-Tank-T—Fuel Filters. Robert Barclay, Inc., Chicago, Ill.
Tygon—Metal Protecting Paint. U. S. Stoneware Co., New York, N. Y.
Tyl-Lyke—Steel Roofing and Siding. Continental Steel Corp., Kokomo, Ind.
Tymotherm—Thermostats. Tork Clock Company, Inc., Mount Vernon, N. Y.
Type X—Stainless Cleaner. Turco Products, Inc., Los Angeles, Calif.

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U-Loy—Copper Bearing Steel Sheets. Republic Steel Corp., Cleveland, Ohio.
U-Set—Snips and Shears. W. H. Compton Shear Co., Newark, N. J.
U Tube—Water Heaters. Handley Brown Heater Co., Jackson, Mich.
Ucilon—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.
U-G-L—Furnace Cement. United Gilsonite Laboratories, Scranton, Pa.
Ultralite—Duct and Furnace Insulation. Gustin-Bacon Mfg. Co., Kansas City, Mo.
UMCO—Furnaces. Union Mfg. Co., Boyertown, Pa.
Unarco—Air Conditioning Units, Coils, Cooling Towers. Union Asbestos & Rubber Co., Chicago, Ill.
Uni-Flo—Grilles, Registers & Air Diffusers. Barber-Colman Co., Rockford, Ill.
Uni-Tile—Combustion Chambers. Insulation & Refractories Co., Williamson, N. Y.
Uni-wash—Blow Pipe Collectors. Newcomb-Detroit Co., Detroit, Mich.
Unichrome—Sheet Metal Paint. United Chromium, Inc., New York, N. Y.
Uniclosed—Motors. U. S. Electrical Motors, Inc., Los Angeles, Calif.
Unicoil—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.
Unicon—Refrigerating Condensers. Kramer Trenton Co., Trenton, N. J.
Unifil—Insulation. Robinson Insulation Co., Great Falls, Mont.
Unifilter—Fuel Oil Filters. General Filters, Inc., Novi, Mich.
Uniflare—Copper Tube Fittings. Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Uniloy—Stainless Steel Sheets. Universal-Cyclops Steel Corp., Bridgeville, Pa.
Unipack—Blowers, Exhausters. American Machine Products Co., Marshalltown, Iowa.
Unishear—Portable Electric Shears. Stanley Electric Tool Div., Stanley Works, New Britain, Conn.
Unisorb—Bases and Pads. Felters Co., Boston, Mass.
Unitaire—Air Conditioning Units. Westinghouse Electric Corp., Sturtevant Div., Boston, Mass.
Unitaire—Gas Furnaces. Hammel Radiator Eng. Co., Los Angeles, Calif.
Unitherm—Air Conditioning Units. Clarage Fan Co., Kalamazoo, Mich.
UniTrane—Air Conditioning Units. Trane Co., LaCrosse, Wis.
Universal—Angle Benders. Hossfeld Mfg. Co., Winona, Minn.
Universal—Electric Tools. Chicago Pneumatic Tool Co., New York, N. Y.
Universal—Waterproofing. Philip Carey Mfg. Co., Cincinnati, Ohio.
Unxld—Duct Damper Regulators. Parker-Kalon Div., General American Transportation Corp., New York, N. Y.
usAIRco—Air Conditioning Units, Blowers and Blower-Filter Units, Coils, Fans, Grilles, and Blower Wheels. U. S. Air Conditioning Corp., Minneapolis, Minn.
USG—Built-Up Roofing and Roof Cement and Paint. United States Gypsum Co., Chicago, Ill.
USRC—Registers, Damper Regulators. U. S. Register Co., Battle Creek, Mich.
U.S.S.—Steel Products. Columbia-Geneva Steel Div., San Francisco, Calif.; National Tube Co., Pittsburgh, Pa.; Tennessee Coal and Iron Div., Fairfield, Ala.; U.S. Steel Co., Pittsburgh, Pa., Subs. U.S. Steel Corp., Pittsburgh, Pa.
Utility—Fan Ventilator. Arex Co., Chicago, Ill.

V

V-Crimp—Roofing. Inland Steel Products Co., Milwaukee, Wis.
V-Drain—Roofing. Tennessee Coal & Iron Div., U. S. Steel Corp., Fairfield, Ala.
V-Vent—Ventilators. Aeolus Dickinson, Chicago, Ill.
Valcalox—Damper Regulators. Young Regulator Co., Cleveland, Ohio.
Valdura—Caulking Compounds, Paint. American-Marietta Co., Chicago, Ill.
Valley Forge—Cement. Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Valvent—Ventilators. Swartwout Co., Cleveland, Ohio.
Vanco—Skylights and Ventilators. E. Van Noorden Co., Boston, Mass.
Vapoglas—Evaporative Humidifiers. Skuttle Mfg. Co., Milford, Mich.
Vapor-Oil—Burners and Furnaces. Metro Metal Mfg. Co., Holt, Mich.
Vaporaire—Air Conditioners. Penn Boiler & Burner Mfg. Corp., Lancaster, Pa.
Vaporseal—Waterproofing. Angier Corp., Farmingham, Mass.
Vaporite—Humidifiers. Automatic Humidifier Co., Cedar Falls, Iowa.
Vari-Pitch—Speed Changers. Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Varidrive—Motors, Transmissions. U. S. Electrical Motors, Inc., Los Angeles, Calif.
Veelos—V-Belts. Manheim Mfg. & Belting Co., Manheim, Pa.
Velometer—Air Velocity Meters. Illinois Testing Laboratories, Inc., Chicago, Ill.
Ventalarm—Fuel Tank Signal Gauge. Scully Signal Co., Cambridge, Mass.
Ventfab—Flexible Duct Connections. Iden Associates, Chicago, Ill.
Ventglas—Flexible Duct Connections. Iden Associates, Chicago, Ill.
Ventilette—Fans. Diehl Manufacturing Company, Somerville, N. J.
Ventrola—Ventilators, Fans. National Appliance Co., Detroit, Mich.
Ventube—Rubberized Tubing. E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Ventura—Fans, Ventilators. American Blower Corp., Detroit, Mich.
Venturi-Flo—Air Diffusers, Ceiling Ventilators. Barber-Colman Co., Rockford, Ill.
Venturi-Top—Roof Ventilators. Walker Mfg. & Sales Corp., St. Joseph, Mo.
Ventvinyl—Flexible Duct Connections. Iden Associates, Chicago, Ill.
Vermiculite—Insulation. International Vermiculite Co., Girard, Ill.
Vernois—Furnace Repair & Parts. Mt. Vernon Furnace and Mfg. Co., Mt. Vernon, Ill.
Versa-Tool—Portable Electric Drill. York Electric and Machine Co., York, Pa.
Versat-Aire—Air Conditioning Units. Round Oak Co., Inc., Dowagiac, Mich.
Vertex—Caulking Compounds, Paint. J. C. Whitlam Mfg. Co., Wadsworth, O.
Vibra-Cork—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
Vibro-Bars—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
Vibro-Insulators—Vibration Insulating Pads. B. F. Goodrich Co., Akron, Ohio.
Vibro-Isolator—Vibration Isolating Bases. Korfund Co., Inc., Long Island City, N. Y.
Vi-Speed—Pneumatic Hammer. Van Products Co., Erie, Pa.
Victor—Blower-Filter Units, Furnaces, Oil Burners, Stokers. Hall-Neal Furnace Co., Indianapolis, Ind.
Victorgas—Gas Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
Victoroil—Oil Furnaces. Hall-Neal Furnace Co., Indianapolis, Ind.
Victory—Registers. Register & Grille Mfg. Co., Inc., Brooklyn, N. Y.
Vigoraire—Furnaces. Marshall Furnace Co., Marshall, Mich.
Vikimatic—Furnaces. Viking Manufacturing Corp., Cleveland, Ohio.
Viking—Welders. Progressive Welder Sales Co., Detroit, Mich.
Vincul—Rust Remover. Protective Coatings, Inc., Detroit, Mich.
Visaflame—Oil Burner Controls. Mercoid Corp., Chicago, Ill.
Vise-Grip—Clamps. Petersen Mfg. Co., Inc., DeWitt, Nebr.
Visi-Draft—Draft Gauge. F. W. Dwyer Mfg. Co., Chicago, Ill.
Vital-Calker—Caulking Guns. Vital Products Mfg. Co., Cleveland, O.
VitaRay—Space Heaters. Quad Stove Mfg. Co., Columbus, Ohio.
Vitricel—Furnace Cement. Philip Carey Mfg. Co., Cincinnati, Ohio.
Vitro Flame—Oil Burners. Kresno-Stamm Mfg. Co., Palisades Pk., N. J.
Vitroliner—Prefabricated Chimneys, Chimney Linings, Vent and Flue Pipe and Fittings. Condensation Engineering Corp., Chicago, Ill.
Volocitrol—Air Control Vanes. Barber-Colman Co., Rockford, Ill.
Vortex—Oil Burners. Iron Fireman Mfg. Co., Cleveland, Ohio.
Vortex—Spray Nozzles. Phillips Cooling Tower Co., Inc., Brooklyn, N. Y.
V & S Drive—Variable Speed Transmissions. Reliance Electric & Engineering Co., Cleveland, O.
V & S Jr.—Variable Speed Transmissions. Reliance Electric & Engineering Co., Cleveland, O.
Vulcan—Stokers. Canton Stoker Corp., Canton, Ohio.
Vulcanite—Fel: Roofing, Roofing Cement. Certain-teed Products Corp., Ardmore, Pa.
Vulcatex—Caulking and Glazing Compounds. A. C. Horn Co., Inc., Long Island City, N. Y.
Vulco—V-Belts and Pulleys. Gates Rubber Co., Denver, Colo.
Vulcomount—Pulleys. Gates Rubber Co., Denver, Colo.

W

W—Sheets. Wheeling Corrugating Co., Wheeling, W. Va.
Warco—Refractories. Walsh Refractories Corp., St. Louis, Mo.
Warco—Presses & Dies. Federal Machine & Welder Co., Warren, Ohio.
Warmahl—Furnaces. Mahl Mfg. Co., Huntington Park, Calif.
Warmolator—Space Heaters. Williams Radiator Co., Glendale, Calif.
Wascolite Skydomes—Skylights. Wasco Flashing Co., Cambridge, Mass.
Washington—Furnaces. Gray & Dudley Co., Nashville, Tenn.
Watco—Spray Nozzles. Water Cooling Corp., New York, N. Y.

Water-Boy—Humidifier Valves. Maid-O'-Mist, Inc., Chicago, Ill.
Water-RAY-trola—Oil-fired Water Heater. Ray Oil Burner Co., San Francisco, Calif.
Waterbase—Furnaces. Farris Furnace Co., Springfield, Ill.
Waterbury—Oil Burners. Furnaces, Waterman-Waterbury Co., Minneapolis, Minn.
Waterfoil—Waterproofing. A. C. Horn Co., Long Island City, N. Y.
Waterloo Airfoil—Grilles, Louvres, Registers. Titus Manufacturing Corporation, Waterloo, Iowa.
Waterseal—Cement. Thompson & Co., Oakmont, Pa.
Waterspar—Enamels and Lacquers. Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Watertender—Humidifier Valves. Skuttle Mfg. Co., Milford, Mich.
WAW—Tools. W. A. Whitney Mfg. Co., Rockford, Ill.
Weath-R-Seal Washers—Sheet Metal Fastenings. Fabricated Products Co., West Newton, Pa.
Weathercaster—Controls. Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.
Weather-Chrome—Time Switches. Automatic Devices Co., Inc., Western Springs, Ill.
Weather-Flo—Controls. Automatic Devices Co., Inc., Western Springs, Ill.
Weathermaker—Air Conditioning Units. Carrier Corp., Syracuse, N. Y.
Weather-Man—Weather Compensating Thermostats, Automatic Devices Co., Inc., Western Springs, Ill.
Weathertwin—Windows. Chamberlin Co. of America, Detroit, Mich.
Weatherwood—Insulation. United States Gypsum Co., Chicago, Ill.
Webco—Portable Brakes. Webb Machine & Tool Co., Imperial, Pa.
Wedgebelt—Belts and Pulleys. American Pulley Co., Philadelphia, Pa.
Weir—Furnaces, Heaters, Stokers. Meyer Furnace Co., Peoria, Ill.
Weircoloy—Copper Bearing Galvanized Sheets. Weirton Steel Co., Weirton, W. Va.
Weirite—Tin Plate. Weirton Steel Co., Weirton, W. Va.
Weirzin—Electrolitic Zinc Coated Sheets. Weirton Steel Co., Weirton, W. Va.
Weisco—Skylight Lifts. H. Weiss & Co., New York, N. Y.
Weld-o-trol—Spot Welders. Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
Weldmaster—Brazing Torches. Modern Engineering Co., St. Louis, Mo.
Wellsville Savage—Refractories. Chicago Fire Brick Co., Chicago, Ill.
Wesco—Blower-Filters, Oil Burners, Cabinets & Casings, Furnaces. Northwest Foundry & Furnace Co., Portland, Ore.
Western—Blowers, Furnaces. International Sales Co., San Francisco, Calif.
Western—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
Western Airout—Roof Ventilators. Western Engineering & Mfg. Co., Venice, Calif.
Western Ridge—Roof Ventilators. Western Engineering & Mfg. Co., Venice, Calif.
Western Rotary—Roof Ventilators. Western Engineering & Mfg. Co., Venice, Calif.
Westernaire—Fans. Western Engineering & Mfg. Co., Venice, Calif.
Wet Wing—Furnace Humidifiers. Illinois Iron & Bolt Co., Freeman Heating Div., Chicago, Ill.
Wetoil—Soldering Flux. Farrelloy Co., Inc., Philadelphia, Pa.
Wevelite—Insulation. Insulite Div., Minnesota and Ontario Paper Co., Minneapolis, Minn.
Whip Clamp—Clamping Device. Whipple Sheet Metal Works, Lansing, Mich.
Whippet—Hoists. Ford Chain Block Div. American Chain & Cable Co., Inc., York, Pa.
Whirlcone—Spray Nozzles. Water Cooling Equipment Corp., St. Louis, Mo.
Whirljet—Water Nozzles. Spraying Systems Co., Bellwood, Ill.
Whirlout—Ventilators. Swartwout Co., Cleveland, Ohio.
Whitney-Jensen—Sheet Metal Working Machinery and Tools. Whitney Metal Tool Co., Rockford, Ill.
Wiechert—Furnaces, Heaters. St. Clair Foundry Corp., Centralia, Ill.
Wilson—Arc Welders. Air Reduction Sales Co., New York, N. Y.
Wilson—Furnace Brushes. Worcester Brush & Scraper Co., Worcester, Mass.
Wind Electric—Roof Ventilators. Hirschman-Pohle Co., Inc., LeRoy, N. Y.
Wind-O-Cool—Fans. G. J. Belter Electric Mfg. Co., St. Louis, Mo.
Windial—Anemometers. Friez Instrument Div. Bendix Aviation Corp., Baltimore, Md.
Windmaster—Exhausters. Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Wind-O-Vent—Fans. Diehl Manufacturing Company, Somerville, N. J.
Wind-O-Vent—Ventilator Units. Reed Unit-Fans, Inc., New Orleans, La.
Wingfoil—Fans, Ventilators. L. J. Wing Mfg. Co., Linden, N. J.
Winkler—Oil & Gas Burners, Stokers. Stewart-Warner Corp., U. S. Machine Corp., Lebanon, Ind.
Winter-Chaser—Furnaces, Heaters. Campbell Heating Co., Des Moines, Iowa.
Winterglo—Furnaces. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Winter King—Furnaces. McPherson Furnace & Supply Co., Portland, Ore.
Winterline—Furnaces. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Wisconsin—Motors. Electric Motor Corp., Racine, Wis.
Wizard—Furnaces. Agricola Furnace Co., Inc., Gadsden, Ala.
W.O. No. 1—Rust Preventive Chemicals. Turco Products, Inc., Los Angeles, Calif.
Wolfe—Angle Meter, Center Finders, Circle Meter, Divisor, Protractor. Interstate Sales Co., New York, N. Y.
Wolverine—Furnaces. Marshall Furnace Co., Marshall, Mich.
Wondaire—Furnaces. Cox Mfg. Co., Ridgeville, Ind.
Woolfelt—Duct Insulation. Norristown Magnesia & Asbestos Co., Norristown, Pa.
Woolmaster—Blowers. Molloy Machine Corp., Chicago, Ill.
Wormfeed—Stokers. Canton Stoker Corp., Canton, Ohio.
WR—Controls. White-Rodgers Electric Co., St. Louis, Mo.
Wyandotte—Furnaces. Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Wyco—Flexible Shaft Machines. Wyzenbeek & Staff, Inc., Chicago, Ill.
Wycoflex—Grinder. Wyzenbeek & Staff, Inc., Chicago, Ill.

X

XL—Metal Windows. Herrmann & Grace Co., Brooklyn, N. Y.
X-L-All—Furnaces. Deshler Foundry & Machine Works, Deshler, Ohio.
Xcel-Flux—Soldering Flux. American Products Corp., Chicago, Ill.
Xit—Ventilators. Iona Ventilator Co., Inc., Philadelphia, Pa.
X-Pandoseal—Transparent Waterproofing. X-Pando Corp., Long Island City, N. Y.
XX—Punches. Parker-Kalon Div., General American Transportation Corp., New York, N. Y.

Y

Yager's—Flux. Alex R. Benson Co., Inc., Hudson, N. Y.
Yale—Water Heaters. W. B. Bastian Mfg. Co., Los Angeles, Calif.
Yankee—Damper Clips and Tips. Howes-Woods Company, Cambridge, Mass.
YarWay—Nozzles. Yarnall-Waring Co., Philadelphia, Pa.
Yemco—Buffers, Grinders. York Electric & Machine Co., York, Pa.
Yoloy—Plates and Sheets. Youngstown Sheet & Tube Co., Youngstown, Ohio.
York-Heat—Oil Burners, Furnaces, Heaters. York-Shipley, Inc., York, Pa.
Yorkaire—Air Conditioning Units. York Corp., York, Pa.
YouBert—Collectors and Blow Pipe Fittings. Young & Bertke Co., Cincinnati, Ohio.

Z

Z Seal—Bearings. Shafer Bearing Div., Chain Belt Co., Downers Grove, Ill.
Zaponite—Sheet Metal Paint. Atlas Powder Co., North Chicago, Ill.
Zeph-Air—Gas Furnace. XXth Century Heating & Ventilating Co., Akron, Ohio.
Zephair—Fans. Hunter Fan & Ventilating Co., Inc., Memphis, Tenn.
Zephyr—Furnaces. Premier Furnace Co., Dowagiac, Mich.
Zephyr—Humidifiers. Maid-O'-Mist, Inc., Chicago, Ill.
Zephyr—Portable Electric Drills. Portable Electric Tools, Inc., Chicago, Ill.
Zephyr—Saws. DoAll Company, Minneapolis, Minn.
Zero—Cement and Refractories. Standard Fuel Engineering Co., Detroit, Mich.
Zerolite—Insulation. Johns-Manville, New York, N. Y.
Zilloy—Zinc Roofing and Sheets. New Jersey Zinc Co., New York, N. Y.
Zinaloy—Gutters, Pipe and Fittings, Ridge Roll, Roofing, Shingles and Tile. Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
Zinc-Alloy—Sheets. Inland Steel Co., Chicago, Ill.
Zincgrip—Metal Sheets. Armco Steel Corp., Middletown, Ohio.
Zinodine—Corrosion-preventive and paint bonding chemical. American Chemical Paint Co., Ambler, Pa.
Zip—Portable Spot Welders. Mid-States Welder Mfg. Co., Chicago, Ill.
Zonolite—Insulation. Robinson Insulation Co., Great Falls, Mont.
Zonolite Brand—Insulation. Western Metal Products Co., Minneapolis, Minn.

Section of

American Artisan

1954 DIRECTORY OF WARM AIR HEATING, RESIDENTIAL AIR CONDITIONING AND SHEET METAL PRODUCTS

[Part 4—ALL MANUFACTURERS' ADDRESSES]

A

A & A Register Co., 8327 Clinton Rd., Cleveland 9, Ohio.
A. C. Co., 2093 Torrance Blvd., Torrance, Calif.
A-J Mfg. Co., 2119 Washington St., Kansas City 8, Mo.
A-P Controls Corp., 2450 N. 32nd St., Milwaukee 45, Wis.
Abbeon Supply Co., 179-21 Jamaica Ave., Jamaica 32, N. Y.
Abbott Mfg. Co., 332 E. Main St., Painesville, Ohio.
Acadia Synthetic Products Div., Western Felt Wks., 4115 Ogden Ave., Chicago, Ill.
Accurate Sheet Metal & Mfg. Works, 2336-40 Milwaukee Av., Chicago 47, Ill.
Ace Co., 112 W. Washington St., P. O. Box 1212, Ocala, Fla.
Acer & Whedon, Inc., Commercial St., Medina, N. Y.
Acet-A-Tips Co., 5069 W. Madison St., Chicago 44, Ill.
Ackermann Mfg. Co., Wheeling, W. Va.
Acme Asbestos Covering & Flooring Co., 222 Elizabeth St., Chicago 7, Ill.
Acme Elec. Corp., 81 Water St., Cuba, N. Y.
Acme Electric Heating Co., Inc., 1205 Washington St., Boston 18, Mass.
Acme Electric Welder Co., 2618 Fruitland Ave., Los Angeles 58, Calif.
Acme Equipment Co., Inc., 126 S. Clinton St., Chicago 6, Ill.
Acme Equipment Co. of Oklahoma, Inc., Muskogee, Okla.
Acme Furnace Fitting Co., 844 W. 59th St., Chicago 21, Ill.
Acme Heat & Power Inc., 318 Ten Eyck St., Brooklyn 6, N. Y.
Acme Industries, Inc., Mechanic & Ganson Sts., Jackson, Mich.
Acme Mfg. Co., 7930 State Rd., Philadelphia 36, Pa.
Acme Oil Burner Co., Inc., 210 Third Av. S. W., Cedar Rapids, Iowa.
Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill.
Acme Wire & Iron Works, Canfield & Moran, Detroit 7, Mich.
Acro Tool & Die Works, 4554 Broadway, Chicago 40, Ill.
Acro Welder Mfg. Co., 1825 W. St. Paul Ave., Milwaukee 3, Wis.
Adams Bros. Mfg. Co., Inc., 1500 W. North Av., Pittsburgh 33, Pa.
Adams Co., The, Bridge St., Dubuque, Iowa.
Adams Mfg. Co., 1530 St. Clair Av., Cleveland 14, Ohio.
Adelta Mfg. Co., 21st & Ellsworth Sts., Philadelphia 46, Pa.
Adhesives & Coatings Div., Minnesota Mining & Mfg. Co., 411 Piquette, Detroit, Mich.
Advance Aluminum Castings Corp., 2742 W. 36th Pl., Chicago 32, Ill.
Advance Furnace Co., 2300 E. Douglas, Wichita 7, Kans.
Aerofin Corp., 410 S. Geddes St., Syracuse 1, N. Y.
Aeroil Products Co., Inc., Wesley St., South Hackensack, N. J.
Aeroquip Corp., 300 S. East Ave., Jackson, Mich.
Aerotec Corp., The, Greenwich, Conn.
Aerotrol Engineering Corp., 4135 Brownsville Rd., Pittsburgh 27, Pa.
Aerovent Fan Co., Inc., Ash and Barton Sts., Piqua, Ohio.
Aget-Detroit Co., 606 First National Bank Bldg., Ann Arbor, Mich.
Agnew Electric Co., 127 S. Main St., Milford, Mich.
Agricola Furnace Co., Inc., North 12th St., Gadsden, Ala.
Ahlberg Bearing Co., 3012 W. 47th St., Chicago 32, Ill.
Air Comfort Co., 5204 Chakemco St., South Gate, Calif.
Air Conditioning Engineering Co., 44 First St., Cambridge 41, Mass.
Air Conditioning Equipment Co., 301 N. 7th St., Minneapolis 3, Minn.
Air Conditioning Products Co., 2340 W. Lafayette Blvd., Detroit 16, Mich.
Air Controls, Inc., 2310 E. Superior Av., Cleveland 14, Ohio.
Air Control Products, Inc., Coopersville, Mich.
Air Cooler Corp., Electri-Aire Div., 407 N. Eleventh St., St. Louis 1, Mo.
Air Cooling Engineering Co., Box 744, Evanston, Ill.
Air Devices, Inc., 185 Madison Ave., New York 16, N. Y.
Aireflo Furnace Pipe Co., 750 Rickett Rd., Brighton, Mich.
Air Equipment Co., Inc., 1713 W. Carroll Ave., Chicago 12, Ill.
Airfan Engineering Co., 7401 Anaheim-Telegraph Rd., Los Angeles 22, Calif.
Air Filter Corp., 108 N. Water St., Milwaukee 2, Wis.
Airflame, 648 McAlister Av., Waukegan, Ill.
Airfloor of America, 3840 Delmas Terr., Culver City, Calif.
Airgard Mfg. Co., 362 W. Erie St., Chicago 10, Ill.
Airjet Ventilator Co., 380 Plumosa Dr., Pasadena 10, Calif.
Airmaster Corp., 4317 Ravenswood Av., Chicago 13, Ill.
Air-Maze Corp., 25000 N. Miles Rd., Cleveland 28, O.
Air Purification Service, Inc., 136 Liberty St., New York, N. Y.
Air Reduction Sales Co., 60 E. 42nd St., New York 17, N. Y.
Air & Refrigeration Corp., 475 Fifth Av., New York 17, N. Y.
Air-Speed Tool Co., 1502 W. Slauson Av., Los Angeles 47, Calif.
Air Stream Filter Corp., 2100 Washington Av., St. Louis 3, Mo.
Airtemp Div., Chrysler Corp., 1600 Webster St., Dayton 1, Ohio.
Airtherm Mfg. Co., 706 S. Spring Ave., St. Louis 10, Mo.
Airwasher Corp., Eaton Rapids, Mich.
Ajax Building Bracket Co., 1551 Rydal-Mount Rd., Cleveland Heights 18, Ohio.
Ajax Furnace Fitting Co., Div., Cincinnati Sheet Metal & Roofing Co., 216 E. Front St., Cincinnati 2, Ohio.
Ajax Thermostatic Controls Co., County Line Rd., Gates Mills, Ohio.
Akeley-Steele Co., 225 Galena Blvd., Aurora, Ill.
Alabama Metal Lath Co., P. O. Box 992, Birmingham, Ala.
Aladdin Heating Corp., 1111 West Ave. 137, San Leandro, Calif.
Albertson & Co., Inc., Sioux City 3, Iowa.
Alco Valve Co., 865 Kingsland Av., St. Louis 5, Mo.
Alden Mfg. Co., W. Walnut St., Painesville, Ohio.
Aldrich Co., Wyoming, Ill.
Alfol Div., Reflectal Corp., 155 E. 44th St., New York 17, N. Y.
All-Gas Equipment Co., 3235 N. 31st St., Milwaukee 10, Wis.
All Metal Screw Products Co., Inc., 33 Green St., New York, N. Y.
All-State Welding Alloys Co., Inc., 249-55 Ferris Ave., White Plains, N. Y.
Allan Engineering Co., Box 1211, Dallas 1, Texas.
Allegheny Body Co., Inc., 1633 N. Sixth St., Philadelphia, Pa.
Allegheny Ludlum Steel Corp., 2020 Oliver Bldg., Pittsburgh 22, Pa.
Allen, H. D., 3201 Casitas Ave., Los Angeles 39, Calif.
Allen-Bradley Co., 1335 S. First St., Milwaukee 4, Wis.
Allen Co., Inc., L. B., 6719 Bryn Mawr Ave., Chicago 31, Ill.
Allen Mfg. Co., Inc., Nashville 1, Tenn.
Allen Stoker Co., 235 S. Penn St., Allentown, Pa.
Allen Ventilator Div., Production Planning Co., 704 Woodward, Rochester, Mich.
Allis-Chalmers Mfg. Co., P. O. Box 512, Milwaukee 1, Wis.
Allis Co., Louis, 427 Stewart St., Milwaukee 7, Wis.
Allmetal Weatherstrip Co., 2241 N. Knox Av., Chicago 39, Ill.
Alpha Metals, Inc., 56 Water St., Jersey City, N. J.
Alpha Tool & Supply Co., P.O. Box 119, Westwood, N. J.
Alphil Spot Welding Co., 1058 Pacific St., Brooklyn 1, N. Y.
Alsynite Co. of America, 4654 De Soto St., San Diego 9, Calif.
Alton Mfg. Co., 1112 Ross Av., Dallas 2, Texas.
Alton Mineral Wool Insulation Co., 2317 Whittemore Pl., St. Louis 4, Mo.
Aluminum Co. of America, 801 Gulf Bldg., Pittsburgh 19, Pa.
Aluminum Goods Mfg. Co., Manitowoc, Wis.
Aluminum Wool Div., Carey Electronic Engineering Co., 1880 Clifton Ave., Springfield, O.
Amerform Corp., Real Estate Trust Building, Philadelphia 7, Pa.

Amana Refrigeration, Inc., Amana, Ia.
American Actuator Corp., 40 Hudson St., New York 13, N. Y.
American Agile Corp., P. O. Box 168, Bedford, Ohio
American Air Filter Co., Inc., 355 Central Av., Louisville 8, Ky.
American Blower Corp., Detroit 32, Mich.
American Brass Co., 25 Broadway, New York, N. Y.
American Cabinet Hardware Corp., Rockford, Ill.
American Chemical Paint Co., Brookside Av., Ambler, Pa.
American Clay Forming Co., Tiffin, O.
American Coils Co., Inc., 360 Thomas St., Newark 5, N. J.
American Control Co., Box 629, Compton, Calif.
American Coolair Corp., 3604 Mayflower St., P. O. Box 2300, Jacksonville 3, Fla.
American Cooling Tower Co., 2710 McGee St., Kansas City, Mo.
American District Telegraph Co., 155 Sixth Ave., New York, N. Y.
American Electric Heater Co., 6110 Cass Av., Detroit, Mich.
American Engineering Co., 2446 Aramingo Av., Philadelphia 25, Pa.
American Flange & Mfg. Co., Inc., 30 Rockefeller Plaza, New York 20, N. Y.
American Fluresit Co., Inc., 4011 Red Bank Rd., Cincinnati 27, Ohio.
American Foundry & Furnace Co., 10th & Washington Sts., Bloomington, Ill.
American Furnace Co., 1300 Hampton Av., St. Louis 10, Mo.
American Gas Burner, Inc., 418 S. Pennsylvania St., Indianapolis 4, Ind.
American Hair & Felt Co., 222 N. Bank Dr., Chicago 54, Ill.
American Hard Rubber Co., 11 Mercer St., New York 13, N. Y.
American Ideal-Aire Corp., P. O. Box 470, Mineola, N. Y.
American Instrument Co., Inc., 8010 Georgia Av., Silver Spring, Md.
American Insulator Corp., New Freedom, Pa.
American-Larson Ventilating Co., 1004 Keystone Bldg., Pittsburgh 22, Pa.
American Machine Products Co., 401 S. Third Av., Marshalltown, Iowa.
American-Marietta Co., 101 E. Ontario St., Chicago 11, Ill.
American Metal Hose Branch, American Brass Co., 698 S. Main St., Waterbury 20, Conn.
American Metal Products, 2911 Compton Ave., Los Angeles 11, Calif.
American Mohawk Co., Inc., 580 Hudson St., New York 14, N. Y.
American MonoRail Co., 13133 Athens Ave., Cleveland 7, Ohio.
American Nickeloid Co., 1505 Second St., Peru, Ill.
American Products Corp., 422 S. Dearborn St., Chicago 5, Ill.
American Pulley Co., 4200 Wissahickon Av., Philadelphia 29, Pa.
American Screw Co., Willimantic, Conn.
American Silver Co., Inc., 36-07 Prince St., Flushing, N. Y.
American Solder & Flux Co., 2152 East Norris St., Philadelphia 25, Pa.
American Steel Band Co., P. O. Box 565, Pittsburgh 30, Pa.
American Steel & Wire Co., Sub. U. S. Steel Corp., Rockefeller Bldg., Cleveland, Ohio.
American Warming & Ventilating Co., 1017 Summit St., Toledo 4, Ohio.
Aminco Refrig. Products Co., 1000 E. McNichols Rd., Detroit 3, Mich.
Ammerman Co., C. L., 104 N. 2nd St., Minneapolis 1, Minn.
Ampion Corp., 4-88 Forty-Seventh Av., Long Island City 1, N. Y.
Ampower Products Co., 5737 W. 87th St., Oak Lawn, Ill.
Anchor Div. Stratton & Terstegge Co., P. O. Box 311, New Albany, Ind.
Anchor Metal Co., 244 Boerum St., Brooklyn 6, N. Y.
Andrews Heater Co., 1750 W. Jefferson Blvd., Los Angeles 18, Calif.
Anemostat Corp. of America, 10 E. 39th St., New York 16, N. Y.
Angier Corp., Framingham, Mass.
Ansul Chemical Co., Refrigeration Div., Marinette, Wis.
Anthony Co., Streator, Ill.
Anti-Friction Bearings Co., 2020 S. Figueroa St., Los Angeles 7, Calif.
Apollo Metal Works, 66th Pl. & S. Oak Park Av., Clearing Sta., Chicago 38, Ill.
Appleton Supply Co., Inc., P. O. Box 319, Appleton, Wis.
Applied Mechanics Co., 167 Oliver St., Boston 10, Mass.
Aqua-Air Corp., 1040 Hempstead Tpke., Elmont, L. I., N. Y.
Aquatrol Laboratories, Inc., Clifton, N. J.
Arabol Mfg. Co., 110 E. 42nd St., New York 17, N. Y.
Arcos Corp., 1500 S. 50th St., Philadelphia 43, Pa.
Arcweld Mfg. Co., Inc., 3469 Third Av., W., Seattle 99, Wash
Arex Co., 612 N. Michigan Ave., Chicago 11, Ill.
Arizona Maintenance Co., 1920 Miracle Mile, Tucson, Ariz.
Arlington Electric Co., 3530 Easton Av., St. Louis 12, Mo.
Armco Steel Corp., 703 Curtis St., Middletown, Ohio.
Armor Electric Co., 1020 Holland St., Erie, Pa.
Armstrong Co., 1001 E. 103rd St., Chicago 28, Ill.
Armstrong Cork Co., 4404 Concord St., Lancaster, Pa.
Armstrong Furnace Co., 851 W. Third Ave., Columbus 8, O.
Armstrong Products Corp., Box 940, Huntington 12, W. Va.
Arro Expansion Bolt Co., N. Boone Ave., Marion, O.
Arrow Foundry Co., East Album St., Freeport, Ill.
Arrow-Hart & Hegeman Electric Co., 103 Hawthorne St., Hartford 6, Conn.
Art Valve Co., 4662 N. Lincoln Ave., Chicago 25, Ill.
Asbestos Asphalt Insulation, Inc., 2100 W. Fullerton Ave., Chicago 47, Ill.
Ashburn Supply Co., 8648 Warner Dr., Culver City, Calif.
Aston Products, Inc., 22804 Dequindre St., Hazel Park, Mich.
Atcheson Glass Co., T. J., 920 Main St., Buffalo 2, N. Y.
Atchison Specialty Mfg. Co., 1620 Pacific Av., Atchison, Kans.
Atkins Saw Div., Borg-Warner Corp., 402 S. Illinois St., Indianapolis 9, Ind.
Atkomatic Valve Co., 545 W. Abbott St., Indianapolis, Ind.
Atlas Mfg. Co., Eustis and Robbins, St. Paul 14, Minn.
Atlas Powder Co., North Chicago, Ill.
Atlas Valve Co., 282 South St., Newark 5, N. J.
Atlas Welding Accessories Co., 707 Lewiston St., Ferndale 20, Mich.
Auburn Burner Co., Lock Box 269, Auburn, Ind.
Auburn Foundry, Inc., Stoker Div., Lock Box 471, Auburn, Ind.
Auburn Spark Plug Co., Inc., Auburn, N. Y.
Auer Register Co., 6600 Clement Ave., Cleveland 3, Ohio.
Au-Temp-Co Corp., 657 Broadway, New York 12, N. Y.
Auto-Flo Corp., 14590 Schaefer, Detroit 27, Mich.
Autogas Co., 2153 Fullerton Ave., Chicago 47, Ill.
Automatic Burner Corp., 1823 Carroll Av., Chicago 12, Ill.
Automatic Control Co., 995 University Ave., St. Paul 4, Minn.
Automatic Controls Corp., Ann Arbor, Mich.
Automatic Devices Co., Inc., Weather Controls Div., 714 Hillgrove Av., Western Springs, Ill.
Automatic Electric Mfg. Co., 10 State St., Mankato, Minn.
Automatic Firing Corp., 4417 Oleatha Ave., St. Louis 16, Mo.
Automatic Gas Equipment Co., 301 Brushton Av., Pittsburgh 21, Pa.
Automatic Humidifier Co., 19th & Main Sts., Cedar Falls, Iowa.
Automatic Switch Co., 391 Lakeside Ave., Orange, N. J.
Automatic Temperature Control Co., Inc., 5212 Pulaski Av., Philadelphia 44, Pa.
Autorad, Inc., 3535 Fillmore St., Chicago 24, Ill.
Automotive Div., Master Vibrator Co., P. O. Box 657, Dayton 1, O.
Ayres, Inc., 1017 Rosene St., Houston 1, Tex.

B

B & C Metal Stamping Co., 390-392 Means St., N.W., Atlanta 3, Ga.
B/W Controller Corp., 2200 E. Maple Av., Birmingham, Mich.
Babbin, Inc., 258 Canal St., New York 13, N. Y.
Babbitt Chemical Specialties Co., 36 Prospect St., New Bedford, Mass.
Babcock & Wilcox Co., Refractories Div., 161 E. 42nd St., New York 17, N. Y.
Bacharach Industrial Instrument Co., 7000 Bennett St., Pittsburgh 8, Pa.
Bache & Co., Semon, Greenwich & Morton Sts., New York 14, N.Y.
Baer Bros., 438 W. 37th St., New York 18, N. Y.
Bailey Co., Chas. M., 667 Folsom St., San Francisco 7, Calif.
Bailey Meter Co., 1050 Ivanhoe Rd., Cleveland 10, Ohio.
Baker Bros. Inc., Post & Harleau Sts., Toledo 10, Ohio.
Baker Furnace & Cleaner Mfg. Co., 2810 Midwood Av., Toledo 6, Ohio.
Bakeraire Corp., 1508 Evans St., South Windham, Maine.
Bal-Air, Inc., 1210 McGavock St., Nashville, Tenn.
Baldor Electric Co., 4358 Duncan Av., St. Louis 10, Mo.
Baldwin-Hill Co., 597 Breunig Ave., Trenton 2, N. J.
Ballastran Corp., 1701 N. Calhoun St., Ft. Wayne 7, Ind.
Balloffet Dies & Nozzle Co., Inc., 6825 Adams St., Guttenberg, N. J.
Balmar Corp., Woodberry, Baltimore 11, Md.
Baltimore Aircoil Co., Inc., 2615-2635 Mathews St., Baltimore 18, Md.
Baltimore Porcelain Steel Corp., P. O. Box 928 AA, Baltimore 3, Md.
Banner Burner Co., 227-E Indianola Ave., Youngstown 7, Ohio.
Banner Products Co., 6804 N. 43rd St., Milwaukee 9, Wis.
Banner Repair Parts Co., 103 E. Indianola Av., Youngstown 7, Ohio.

Barber-Colman Co., 1101 Rock St., Rockford, Ill.
Barber Gas Burner Co., 3704 Superior Av., Cleveland 14, Ohio.
Bar-Brook Mfg. Co., Inc., 6135 Linwood Av., Shreveport, La.
Barcafer Mfg. Co., Salina, Kans.
Barclay, Inc., Robert, 1234 W. Fulton St., Chicago, Ill.
Bard Mfg. Co., Evansport Road, Bryan, Ohio.
Barkow Mfg. Co., Inc., Aug. G., 2230 S. 43rd St., Milwaukee 15, Wis.
Barksdale Valves, 5125 Alcoa Ave., Los Angeles 58, Calif.
Barnard Co., Geo. A., 74 Prescott St., Worcester, Mass.
Barnebey-Cheney Co., Pur Air Div., Cassady at 8th Ave., Columbus 19, O.
Barnes Metal Products Co., 4425 W. 16th St., Chicago 23, Ill.
Barnhardt Mfg. Co., P. O. Box 2176, Charlotte 1, N. C.
Barreled Sunlight Paint Co., 35 Dudley St., Providence 1, R. I.
Barrett Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Barry Blower Co., 3100 California St., N. E., Minneapolis, Minn.
Barry Corp., 1000 Pleasant St., Watertown, Mass.
Barth Mfg. Co., Milldale, Conn.
Bartlett Mfg. Co., 3003 E. Grand Blvd., Detroit 2, Mich.
Barton Co., 17 N. 6th St., Minneapolis 3, Minn.
Barwick Mfg. Corp., 317 E. 18th, Wichita 5, Kans.
Bastian-Blessing Co., 4201 W. Petersen Av., Chicago 30, Ill.
Bastian Mfg. Co., W. B., 2117 Violet St., Los Angeles 21, Calif.
Bastian-Morley Co., Inc., 208 Truesdale Ave., La Porte, Ind.
Bath Co., Cyril, 32272 Aurora Rd., Solon, O.
Baum Heating Co., Inc., J. H., 6400 Southern Blvd., Youngstown, Ohio
Bayley Blower Co., 1817 S. 66th St., Milwaukee 14, Wis.
Bayonne Steel Products Co., Clinton & Jeliff Aves., Newark 8, N. J.
Beacon-Morris Corp., 60 Brainerd Rd., Allston, Boston 34, Mass.
Bead Chain Mfg. Co., 105 Mountain Grove St., Bridgeport 5, Conn.
Bearlee Products Co., 1255 S. Monroe Ave., Green Bay, Wis.
Bear Mfg. Co., Industrial Div., 2030 Fifth Av., Rock Island, Ill.
Beatty Machine & Mfg. Co., 932 150th St., Hammond, Ind.
Beck Engineering Combustion Kompany, 2100 Cole St., St. Louis 6, Mo.
Beck Mfg. Co., 315-317 W. Main St., New Albany, Ind.
Beckett & Co., Thomas, 2521 Willowbrook Rd., P. O. 7354, Dallas 9, Texas.
Beckett Corp., R. W., 38250 Cleveland Rd., (Route U. S. 20), Elyria, Ohio.
Beckley Perforating Co., 305 North Av., Garwood, N. J.
Belden Machine Co., 1108 Whalley Av., New Haven 15, Conn.
Bellows Co., 222 W. Market St., Akron 9, Ohio
Belmetals Mfg. Co., 1300 Old County Rd., Belmont, Calif.
Belmont Smelting & Refining Works, Inc., 330 Belmont Av., Brooklyn 7, N. Y.
Belter Electric Mfg. Co., G. J., 3830 Olive St., St. Louis 8, Mo.
Benchmaster Mfg. Co., 1835 W. Rosecrans, Gardena, Calif.
Benjamin Air Rifle Co., 1527 S. 8th St., St. Louis 4, Mo.
Benner-Nawman, Inc., 3421 Hollis, Oakland, Calif.
Benson Co., Inc., Alex R. 1040 S. Bay Rd., Hudson, N. Y.
Berger Bros. Co., 229-237 Arch St., Philadelphia 6, Pa.
Berger Furnace Mfg. Co., 5920 Center Av., Pittsburgh 6, Pa.
Berger Mfg. Div. of Republic Steel Corp., 1038 Bleden Ave., N. E., Canton 5, Ohio.
Bergstrom Mfg. Corp., Neenah, Wis.
Berkroy Products Co., 2516 N. Ontario St., Burbank, Calif.
Bern's Mfg. Co., 2278 Elston Av., Chicago 14, Ill.
Bernz Co., Otto, 280 Lyell Ave., Rochester 6, N. Y.
Berridge Shear Co., Jefferson & St. Joseph Sts., Sturgis, Mich
Bertram Co., Harvey P., 1008 W. 9th St., Cincinnati, Ohio.
Bertsch & Co., Church St., Cambridge City, Ind.
Besser Metal Products Corp., 754 Clement Ave., Charlotte, N. C.
Best Register Co., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
Bethlehem Foundry & Machine Co., 225 W. Second St., Bethlehem, Pa.
Bethlehem Steel Co., 701 E. Third St., Bethlehem, Pa.
Bett-Marr Mfg. Co., Hopkins, Minn.
Bettinger Corp., Waltham, Mass.
Betz Corp., 445 State St., Hammond, Ind.
Beverly Shear Mfg. Co., The, 3020 W. 111th St., Chicago 43, Ill.
Beyer Metal Products Co., Rosamond, Calif.
Bica Co., Girard, Ohio
Bieler & Sons, Inc., L., 35-42 41st St., Long Island City, N. Y.
Biersach & Niedermeyer Co., 1937 N. Hubbard St., Milwaukee 12, Wis.
Big Joe Mfg. Co., 900 W. Jackson Blvd., Chicago 7, Ill.
Biggs Boiler Wks. Co., E., 1007 Bank St., E. Akron 5, Ohio
Billmyre Blower Div., Lamson Corp., Syracuse, N. Y.
Binks Mfg. Co., 3114 Carroll Av., Chicago 12, Ill.
Bird-Archer, 4337 N. America St., Philadelphia, Pa.
Bird & Son, Inc., East Walpole, Mass.
Birdsell Mfg. Co., 750 San Antonio Rd., Palo Alto, Calif.
Birks Mfg. Co., 809 Hanover Rd., Meriden, Conn.
Bishop & Babcock Mfg. Co., 4901 Hamilton Av., Cleveland 14, Ohio.
Bishop Co., R. H., 103 N. Second St., Champaign, Ill.
Black & Decker Mfg. Co., 682 Pennsylvania Ave., Towson 4, Md.
Black Diamond Stoker Co., E. 4th & Plymouth, Sioux City, Iowa.
Black Mfg. Co., 201 Second St., Harrison, N. J.
Black, Sivalls & Bryson, Inc., 7500 E. 12th St., Kansas City 26, Mo.
Bliss Co., E. W., 1375 Raff Rd., S.W., Canton, Ohio.
Blower Application Co., 3165 N. 30th St., Milwaukee 16, Wis.
Blue Ridge Talc Co., Inc., Henry, Va.
Bock Corp., 110 S. Dickinson St., Madison 3, Wis.
Bodine Electric Co., 2254 W. Ohio St., Chicago 12, Ill.
Bogue Electric Co., 52 Iowa St., Paterson 3, N. J.
Bohn Aluminum & Brass Corp., 1400 Lafayette Bldg., Detroit, Mich.
Borm Mfg. Co., 23 N. Union St., Elgin, Ill.
Bossert Div., Rockwell Spring and Axle Co., Utica 1, N. Y.
Boston Machine Works Co., 7 Willow St., Lynn, Mass.
Botfield Refractories Co., Swanson & Clymer Sts., Philadelphia 47, Pa.
Bovee Furnace Works, 180 W. Eighth St., Waterloo, Iowa.
Bowlby Air Devices Co., 300 W. Indianapolis, Wichita, Kans.
Bowser, Inc., Incineration Div., Cairo, Ill.
Boyle-Midway, Inc., Correctair Div., 22 E. 40th St., New York, N. Y.
Braden Mfg. Co., Inc., 431 N. 14th St., Terre Haute, Ind.
Brandes Co., 2046 Winnebago St., Madison 4, Wis.
Brasco Mfg. Co., 152nd & Commercial Av., Harvey, Ill.
Brauer Supply Co., A. G., 2100 Washington Ave., St. Louis 3, Mo.
Breese Burners, Inc., P. O. Box 4158, Coronado Station, Sante Fe, N. Mex.
Breeze Corps., Inc., 43 S. 6th St., Newark 7, N. J.
Breidert, G. C., Co., P. O. Box 1190, San Fernando, Calif.
Bremil Mfg. Co., Box 1030, Erie, Pa.
Breuer Electric Mfg. Co., 5100 N. Ravenswood Ave., Chicago 40, Ill.
Bridgeport Brass Co., 30 Grand St., Bridgeport 2, Conn.
Bristol Co., P.O. Box 1790, Waterbury 20, Conn.
Bristol Metal Working Equipment, 534 Front St., Hartford, Conn.
Broan Mfg. Co., Inc., 1669 N. Water St., Milwaukee 2, Wis.
Brooks Co., Inc., B. D., 310 Atlantic Ave., Boston 10, Mass.
Brown-Brockmeyer Co., Inc., 1098 Smithville Rd., Dayton 1, Ohio.
Brown Fintube Co., The, Elyria, Ohio
Brown Products Co., 97-12 Metropolitan Ave., Forest Hills, N. Y.
Browning Mfg. Co., Inc., Central Ave., Main & Chester Sts., Maysville, Ky.
Brulin Co., 2939 Columbia Ave., Indianapolis, Ind.
Brumme Mfg. Co., 1240 E. Empire St., R. R. 1, Bloomington, Ill.
Brundage Co., 500 N. Park St., Kalamazoo 11, Mich.
Brunner Mfg. Co., 1821 Broad St., Utica 1, N. Y.
Brushes & Brooms Co., 75 Warren St., New York, N. Y.
Bryan Steam Corp., P. O. Box 337, Peru, Ind.
Bryant Corp., C. L., 2720 E. 79th, Cleveland 4, Ohio
Bryant Heater Div., Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, Ohio.
Buchanan Electric Products Corp., 226 Route 22, Hillside, N. J.
Buckeye Furnace Pipe Co., Columbus 8, Ohio.
Buckeye Water Heater Co., 6901 Quincy Ave., Cleveland 4, Ohio.
Budco Inc., 13415 Gratiot Av., Detroit 5, Mich.
Buensod-Stacey, Inc., 60 E. 42nd St., New York 17, N. Y.
Buffalo Forge Co., 497 Broadway, Buffalo, N. Y.
Bundy Tubing Co., 8109 E. Jefferson Ave., Detroit 14, Mich.
Burcott Mills, 618 W. Fulton St., Chicago, Ill.
Burden Co., Alan E., 3352 Motor Ave., Los Angeles 34, Calif.
Burdett Mfg. Co., 2756 S. Trumbull, Chicago, Ill.
Burgess-Norton Mfg. Co., 773 Peyton St., Geneva, Ill.
Burke Engineering Co., 1204 W. Washington Blvd., Los Angeles 7, Calif.
Burnley Battery & Mfg. Co., 103 Clay St., North East, Pa.
Burnrite Valve Mfg. Corp., 175 W. 1st St., Mt. Vernon, N. Y.
Burns Machinery Co., F. W., 1730 W. North Av., Milwaukee 5, Wis.
Burt Mfg. Co., 38 E. South St., Akron 11, Ohio.
Bush Mfg. Co., 179 South St., West Hartford 10, Conn.
Byers Co., A. M., Clark Bldg., Pittsburgh 22, Pa.

C

C. & H. Air Conditioning Fan Co., Inc., 1603 DeKalb Ave., N. E., Atlanta 6, Ga.
Cabot, Inc., Samuel, 141 Milk St., Boston 9, Mass.
Cady Co., Sub. General Fittings Co., 123 Georgia Av., Providence 5, R. I.
Calbar Paint & Varnish Co., 2612 N. Martha St., Philadelphia 25, Pa.
Calcinator Corp., 28th & Water, Bay City, Mich.
Calculator Specialties Co., 122 S. Michigan Ave., Chicago 3, Ill.
Callahan Can Machine Co., Inc., 80 Richards St., Brooklyn, N. Y.
Caloroil Burner Corp., 850 Windsor St., Hartford 5, Conn.
Cambridge Corp., 350 S. Geddes St., Syracuse, N. Y.
Camloc Fastener Corp., 22 Spring Valley Rd., Paramus, N. J.
Campbell Co., E. K., 1809 Manchester Ave., Kansas City 26, Mo.
Campbell Heating Co., 3121 Dean Av., Des Moines 17, Iowa.
Campbell Machine Div., American Chain & Cable Co., Inc., 929 Connecticut Ave., Bridgeport 2, Conn.
Campbell Stainless Products Co., Washington, Pa.
Cam-StaT Inc., Div. Paul Henry Co., 11833 W. Olympic Blvd., Los Angeles 64, Calif.
Cannelton Sewer Pipe Co., Radiantile Div., Fourth & Washington Sts., Cannelton, Ind.
Canton Stoker Corp., 507 Andrews Pl., S. W., Canton 1, Ohio.
Carajon Chemical Co., Inc., 428 W. Main St., Fremont, Mich.
Carbide & Carbon Chemicals Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Carboline Co., 331 Thornton Ave., St. Louis 19, Mo.
Carey Mfg. Co., Philip, Cincinnati 15, Ohio.
Cargocaire Engineering Corp., 15 Park Row, New York 38, N. Y.
Carlon Products, 10225 Meech, Cleveland, Ohio
Carnes Co., W. R., S. Main St., Verona, Wis.
Carolina Aniline & Extract Co., Inc., P. O. 2386, Charlotte, N. C.
Carolina Blower Co., Inc., 430 Morehead Ave., Greensboro, N. C.
Carpenter Heating & Stoker Co., 2135 St. Clair Ave., Cleveland 14, Ohio.
Carrier Corp., 308 S. Geddes St., Syracuse 1, N. Y.
Carter Paint Co., 310 N. Main St., Liberty, Ind.
Cartier & Sons Co., M. N., 275 Canal St., Providence 3, R. I.
Carvell Heat Equipment Co., 1217 Temple St., Los Angeles 26, Calif.
Cary Mfg. Co., Waupaca, Wis.
Cash Co., A. W., P. O. Box 551, Decatur, Ill.
Cauhorn Distributing Co., 9999 Broadstreet, Detroit 4, Mich.
Celco Corp., 110 E. 42nd St., New York 17, N. Y.
Celotex Corp., 120 S. LaSalle St., Chicago 3, Ill.
Cemenstone Corp., Neville Island, Pittsburgh 25, Pa.
Central Furnace & Stove Repair Co., 3937 Olive St., St. Louis 8, Mo.
Central Rubber & Steel Corp., Findlay, Ohio.
Central States Mfg. Co., Inc., 1200 S. Summit, Arkansas City, Kans.
Central Transformer Corp., Pine Bluff, Ark.
Central West Machinery Co., 335 S. Western, Chicago, Ill.
Centri-Spray Co., 14290 Meyers Rd., Detroit 27, Mich.
Century Electric Co., 1806 Pine St., St. Louis 3, Mo.
Century Engineering Corp., 401 Third St., S. E., Cedar Rapids, Iowa.
Century Fan & Ventilator Co., 43 Cedar St., Stamford, Conn.
Ceramic Products Mfg. Co., 139 E. Garfield Av., Milwaukee 12, Wis.
Certain-teed Products Corp., 120 E. Lancaster Ave., Ardmore, Pa.
Certified Furnace Corp., P. O. Box 1059, Trenton 8, N. J.
Chain Belt Co., 4618 W. Greenfield Ave., Milwaukee 14, Wis.
Chalmers Oil Burner Co., 312 Lumber Exchange Bldg., Minneapolis 1, Minn.
Chamberlin Co. of America, 1254 Labrosse, Detroit 32, Mich.
Chambers Products, Inc., 2468 N. Meridian, Indianapolis, Ind.
Champion Blower & Forge Co., Harrisburg Av., & Charlotte St., Lancaster, Pa.
Champion Bronze Powder & Paint Co., 2522 W. Van Buren St., Chicago, Ill.
Champion Furnace Pipe Co., 211-215 Eaton St., Peoria 3, Ill.
Champion Implement Corp., 175 E. 87th St., New York 28, N. Y.
Champion Products Co., 1197 Terrace St., Muskegon, Mich.
Char-Gale Mfg. Co., 4325 Hiawatha Av., Minneapolis 6, Minn.
Chase Brass & Copper Co., Inc., 236 Grand St., Waterbury 20, Conn.
Chase Products, Inc., 1816 St. Charles Rd., Maywood, Ill.
Chattanooga Implement & Mfg. Co., First and Delmar Sts., Chattanooga 6, Tenn.
Cheesman-Elliot Co., Inc., 639 Kent Av., Brooklyn 11, N. Y.
Chelsea Fan & Blower Co., Inc., 639 South Ave., Plainfield, N. J.
Chemical Solvent Co., 3005 N. 16th St., Birmingham, Ala.
Chemold Co., 2000 Colorado Blvd., Santa Monica, Calif.
Cheney Flashing Co., 623 Prospect St., Trenton 5, N. J.
Chevrolet Motor Div., General Motors Corp., Detroit 2, Mich.
Chicago Automatic Stoker Co., Inc., 14 N. Clinton St., Chicago 6, Ill.
Chicago Belting Co., 113 N. Green St., Chicago 7, Ill.
Chicago Blower Corp., 9867 Pacific Ave., Franklin Park, Ill.
Chicago Die Casting Co., 2510-14 W. Monroe St., Chicago 12, Ill.
Chicago Expansion Bolt Co., 1338 W. Concord Pl., Chicago 22, Ill.
Chicago Fire Brick Co., 1467 N. Elston Av., Chicago 22, Ill.
Chicago Furnace Supply Co., 1278 Clybourn Av., Chicago 10, Ill.
Chicago Heights Furnace Supply Co., 102 E. 22nd St., Chicago Heights, Ill.
Chicago Metal Mfg. Co., 3724 S. Rockwell St., Chicago 32, Ill.
Chicago Perforating Co., 2445 W. 24th Pl., Chicago 8, Ill.
Chicago Pneumatic Tool Co., 6 E. 44th St., New York 17, N. Y.
Chicago Rawhide Mfg. Co., 1312 Elston Av., Chicago 22, Ill.
Chicago Rivet & Machine Co., 9600 W. Jackson Blvd., Bellwood, Ill.
Chicago Smelting & Refining Corp., 3701 S. Kedzie Ave., Chicago 32, Ill.
Chicago Steel Furnace Co., 9326 S. Anthony Ave., Chicago 17, Ill.
Chicago Tramrail Co., 4000 W. Washington Blvd., Chicago 24, Ill.
Chimney Sales Corp., P. O. Box 146, Fredricksburg, Va.
Chisholm-Moore Hoist Corp., Div. Columbus McKinnon Chain Corp., Fremont Av., Tonawanda, N. Y.
Cincinnati Elbow Co., 2021 Eastern Ave., Cincinnati, Ohio.
Cincinnati Shaper Co., Hopple, Garrard & Elam, Cincinnati 25, Ohio.
Cincinnati Stamping & Furnace Co., 28 W. McMicken Ave., Cincinnati 10, Ohio.
Circulators & Devices Mfg. Corp., 128-168 32nd St., Brooklyn 32, N. Y.
Cirklair Products Div., Folsom Co., Inc., 3104 Oak Lane, Dallas 10, Texas.
Clarage Fan Co., North & Porter Sts., Kalamazoo 16, Mich.
Clark Bros. Bolt Co., Milldale, Conn.
Clark Controller Co., 1146 E. 152 St., Cleveland 10, Ohio.
Clark-Hopkins Equipment Corp., 1124 Spring Garden St., Philadelphia 23, Pa.
Clark Jr., Electric Co., James, 600 E. Bergman St., Louisville 3, Ky.
Clark Co., Robert H., 9330 Santa Monica Blvd., Beverly Hills, Calif.
Clark Stek-O Corp., 1631 Dewey Av., Rochester 13, N. Y.
Clay Equipment Corp., Cedar Falls, Iowa.
Clayton & Lambert Mfg. Co., Louisville Div., 1707 Dixie Hwy., Louisville 10, Ky., and Middletown, Ohio.
Clearing Machine Corp., 6499 W. 65th St., Chicago 38, Ill.
Clemson Bros., Inc., Middletown, N. Y.
Cleveland Crane & Engineering Co., 5866 E. 283rd St., Wickliffe, Ohio.
Cleveland Heater Co., 2310 Superior Av., N. E., Cleveland 14, Ohio.
Cleveland Humidifier Co., 7802 Wade Park Av., Cleveland 3, Ohio.
Cleveland Punch & Shear Works Co., E. 40th & St. Clair Av., Cleveland 14, Ohio.
Climatemaker Heat Loss Calculator Co., Box 378, Bloomington, Ill.
Climax Machinery Co., 301 S. LaSalle St., Indianapolis 6, Ind.
Clinton Metallic Paint Co., Clinton, N. Y.
Coal-O-Matic Co., Trucksville (Luzerne County), Pa.
Coast Insulating Products, 2316 San Fernando Rd., Los Angeles 65, Calif.
Coated Coil Corp., 539 W. 30th St., New York 1, N. Y.
Cole Hot Blast Mfg. Co., 3817 S. Racine Av., Chicago 9, Ill.
Coleman Co., Inc., St. Francis & Second St., Wichita 1, Kans.
Cole-Sewell Engineering Co., 2288 University Av., St. Paul 4, Minn.
Columbia Burner Co., 729 Ewing St., Toledo 7, Ohio.
Columbia-Geneva Steel, Div. United States Steel Corp., Russ Bldg., 235 Montgomery St., San Francisco 6, Calif.
Columbia Specialty Co., Inc., 4925 Bradley Blvd., Chevy Chase 15, Md.
Columbus Heating & Ventilating Co., 182 N. Yale Av., Columbus 16, Ohio.
Combustion Control Corp., 718 Beacon St., Boston 15, Mass.
Combustion Equipment Co., Box 734 B, Silvis, Ill.
Comfort Products Corp., 2220 S. Lamesa St., Dallas 2, Texas.

Commercialaire, Inc., 300 Pacific St., Brooklyn 2, N. Y.
Commercial Filters Corp., 2 Main St., Melrose 76, Mass.
Commercial Plastics Co., 2226 Wabansia Ave., Chicago 47, Ill.
Commercial Shearing & Stamping Co., P. O. Box 719, Youngstown 1, Ohio.
Commonwealth Brass Corp., 5781-5835 Commonwealth Av., Detroit 8, Mich.
Commonwealth Co., 2127 W. Commonwealth Av., Alhambra, Calif.
Compton Shear Co., W. H., 314 Camden St., Newark 3, N. J.
Conco Engineering Works, Heating Division, Mendota, Ill.
Condensation Engineering Corp., 3511 W. Potomac Ave., Chicago 51, Ill.
Condenser Service & Engineering Co., Inc., 95 River St., Hoboken, N. J.
Congress Drives, Div. Tann Corp., 3750 E. Outer Dr., Detroit 34, Mich.
Conklin Brass & Copper Co., Inc., T. E., 54-60 Lafayette St., New York 13, N. Y.
Connecticut State Furnace Co., Inc., 340 Kossuth St., Bridgeport, Conn.
Connery Construction Co., Second & Luzerne Sts., Philadelphia 40, Pa.
Connor Engineering Corp., Shelter Rock Lane, Danbury, Conn.
Connors & Davis Sales Corp., Circuit Ave., West Springfield, Mass.
Consolidated Industries, Inc., Lafayette, Ind.
Continental Air Filters, Inc., P. O. Box 1647, Louisville 1, Ky.
Continental-Diamond Fibre Co., Newark, Del.
Continental Instrument Co., 1530 St. Clair Ave., Cleveland 14, Ohio.
Continental Products Co., 1150 E. 222nd St., Euclid 17, Ohio.
Continental Screw Co., Mt. Pleasant St., New Bedford, Mass.
Continental Steel Corp., 1108 S. Main St., Kokomo, Ind.
Continental Water Heater Co., 1801 Pasadena Av., Los Angeles 31, Calif.
Controlair Mfg. Co., 1932 S. Compton Av., Los Angeles 11, Calif.
Coogan Co., Inc., Frank J., 6319 Broad St., Pittsburgh 6, Pa.
Cook Co., Loren, 664 Front St., Berea, Ohio
Cool-Ette, Inc., 20080 Jas. Couzens Highway, Detroit, Mich.
Coolerator Co., New Garrick Bldg., Duluth, Minn.
Cooper Co., Clark, Palmyra, N. J.
Cooper Stoker Co., 117 Fourth St., Pittsfield, Mass.
Coopers Creek Chemical Corp., West Conshohocken, Pa.
Copeland Refrigeration Corp., Sidney, Ohio.
Copperweld Steel Co., Box 1000, Glassport, Pa.
Coppus Engineering Corp., 344 Park Ave., Worcester 2, Mass.
Corbin Div., P & F, American Hardware Corp., 67 Park St., New Britain, Conn.
Corbman Bros., Inc., 25th & York St., Philadelphia, Pa.
Cordo Chemical Corp., 34 Smith St., Norwalk, Conn.
Cork Insulation Co., Inc., 730 5th Av., New York, N. Y.
Corlett-Turner Co., 1001 S. Kostner Ave., Chicago 24, Ill.
Coroaire Heater Corp., 1422 Euclid Ave., Cleveland 15, Ohio.
Corrosite Corp., Chrysler Bldg., New York 17, N. Y.
Cotta Transmission Co., 2340 Eleventh St., Rockford, Ill.
Coughlan Co., G. N., West Orange, N. J.
Coward-Eastman Co., 43 South 23rd, Philadelphia, Pa.
Cox Mfg. Co., Ridgeville, Ind.
Cramer Co., Inc., The R. W., Box 36, Centerbrook, Conn.
Cramer Mfg. Co., 5110 Westfield Ave., N. W., Canton, Ohio.
Crandall Mfg. Co., 1512 W. Slauson, Los Angeles 44, Calif.
Crane Co., 836 S. Michigan Av., Chicago 5, Ill.
Crary, T. F., 396 N. Second St., Middleport, Ohio.
Crescent Tool Co., 230 Harrison St., Jamestown, N. Y.
Cribben and Sexton Co., 700 N. Sacramento, Chicago, Ill.
Crise Controls Div. Acro Mfg. Co., 2040 E. Main St., Columbus 16, Ohio.
Cristy Specialty Corp., Worcester, Mass.
Crocker-Wheeler Div., Elliott Co., Ampere 1, N. J.
Cromley's, Lewisburg, Pa.
Cross & Currier Mfg. Co., Inc., 173 Washington St., Claremont, N. H.
Cross Engineering Co., 160-178 Dundaff St., Carbondale, Pa.
Crowell & Dunn, Inc., 225 Lafayette St., New York, N. Y.
Crown Controls Co., Inc., New Bremen, Ohio.
Crown Engineering Corp., Locust St., Keyport, N. J.
Crucible Steel Co., Henry W. Oliver Bldg., P. O. Box 88, Pittsburgh 30, Pa.
Cummins Portable Tool Co., 4740 N. Ravenswood, Chicago, Ill.
Cuno Engineering Corp., 80 S. Vine St., Meridan, Conn.
Cuprometal Mfg. Corp., 44th Ave., & Junction Blvd., Corona, N. Y.
Curtis Refrigerating Machine, Div. Curtis Mfg. Co., 1946 Kienlen Av., St. Louis 20, Mo.
Cutler-Hammer, Inc., 430 N. 12th St., Milwaukee 1, Wis.
Cuyahoga Spring Co., 10254 Berea Road, Cleveland 2, Ohio.

D

Daffin Mfg. Co., North Prince St., Lancaster, Pa.
Dahlstrom Machine Works, 4227 W. Belmont Ave., Chicago 41, Ill.
Dahlstrom Metallic Door Co., S. E. Cor. E. Second & Buffalo Sts., Jamestown, N. Y.
Daly, Merritt & Sullivan, Inc., West Broad St., Falls Church, Va.
Dalzen Mfg. Co., 525 S. Riverside, St. Clair, Mich.
Damascus Steel Products Corp., 2215 Kishwaukee St., Rockford, Ill.
Damp-Vent Co., Box 203, Bettendorf, Ia.
Dana Fan & Blower Corp., 3501 Colerain Ave., Cincinnati 23, Ohio.
Daniels Mfg. Co., Inc., Sam, Daniels Rd., Hardwick, Vt.
Danzer Metal Works Co., Box 128, Hagerstown, Md.
Dary Co., W. M., Long Beach, Calif.
Davidson Hyduty Roof Fan Co., 213 California St., Newton 58, Mass.
Davis Regulator Co., 2546 S. Washtenaw Av., Chicago 8, Ill.
Davis & Son Machine Works, 8426 Compton Av., Los Angeles 1, Calif.
Davison, Inc., Frank D., 428 Aliso St., Los Angeles 12, Calif.
Day Co., 810 Third Av., N. E., Minneapolis 13, Minn.
Day & Night Div., Affiliated Gas Equipment, Inc., P. O. Box 150, Monrovia, Calif.
Dayton Pump & Mfg. Co., 500 N. Webster St., Dayton 1, O.
Dayton Rogers Mfg. Co., 2830 13th Av., S. Minneapolis 7, Minn.
Dayton Rubber Co., 2342 W. Riverview Av., Dayton 1, Ohio.
Dearborn Chemical Co., Merchandise Mart Plaza, Chicago 54, Ill.
Dearborn Stove Co., 1700 W. Commerce St., Dallas 8, Texas.
Debevoise Co., 74 20th St., Brooklyn 32, N. Y.
De Bothezat Fans Div., American Machine & Metals, Inc., East Moline, Ill.
Deepfreeze Appliance Div., Motor Products Corp., North Chicago, Ill.
Deering Air Cond. Co., 1069 Celestial, Cincinnati, Ohio
Defender Instrument and Regulator Co., 815 Clark Av., St. Louis 2, Mo.
Delavan Mfg. Co., Grand Ave. & Fourth St., West Des Moines, Ia.
Delco Appliance Div., General Motors Corp., 391 Lyell Ave., Rochester 6, N. Y.
Delco Products Div., General Motors Corp., 329 E. First St., Dayton, Ohio.
D'Elia Oil Burner Co., 145 Stratford Ave., Bridgeport 8, Conn
Delo Screw Products Co., 38 S. Franklin St., Delaware, O.
Delta Heating Corp., 1 Cole St., Trenton 8, N. J.
Delta Power Tool Div., Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa.
Deluxe Furnace & Wall Heater Co., 1824 S. Burlington Av., Los Angeles 6, Calif.
DeLuxe Oil Burner Co., 2121 First Av., Seattle, Wash.
Demuth & Sons, Inc., Charles, 245 Elm Pl. Mineola, L. I., N. Y.
Deniston Co., 4856 S. Western Ave., Chicago 9, Ill.
Densewood Corp., Elkhorn, Wis.
Denver Fire Clay Co., 2301 Blake St., Denver 17, Colo.
Dersch, Gesswein & Neuert, Inc., 4849 W. Grand Ave., Chicago 39, Ill.
Deshler Foundry & Machine Works, 140 S. East Ave., Deshler Ohio.
Desmond-Stephan Mfg. Co., Urbana, O.
DeSoto Oil Burner Corp., 538 S. Queen St., York, Pa.
Despatch Oven Co., 619 Southeast St., Minneapolis 14, Minn.
De-Tec-Tronic Corp., 2512 N. Halsted St., Chicago 14, Ill.
Detroit Air Conditioning Service Co., Nashville, Mich.
Detroit Controls Corp., 5900 Trumbull Ave., Detroit 8, Mich.
Detroit Hoist & Machine Co., 8202 Morrow St., Detroit 11, Mich.
Detroit Moulding Div., L. A. Young Spring & Wire Corp., 9210 Russell St., Detroit 11, Mich.
Detroit Safety Furnace Pipe Co., 5960 Second Blvd., Detroit 2, Mich.
Detroit Stamping Co., 350 Midland Ave., Detroit 3, Mich.
Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich.
Detroit Stoker Co., General Motors Bldg., Detroit 2, Mich.
DeVilbiss Co., The, 300 Phillips Ave., Toledo 1, Ohio.
Devine Mfg. Co., J. P., Div. of H. K. Porter Co., Inc., 1932 Oliver Bldg., Pittsburgh 22, Pa.

Devoe & Raynolds Co., Inc., 44th St. & 1st Ave., New York 17, N. Y.
Diamond Castings Co., Terra Cotta Rd., Johnsonburg, Pa.
Diamond Expansion Bolt Co., Inc., 500 North Ave., Garwood, N. J.
Diamond Iron Works, Inc., 1728 Second St., N., Minneapolis 11, Minn.
Diamond Machine Tool Co., 3429 E. Olympic Blvd., Los Angeles 23, Calif.
Diamond Mfg. Co., 243 W. 8th St., Wyoming, Pa.
Diceler Div., General Machine & Mfg. Co., Berwick, Pa.
Dick Co., Inc., R. & J., 24-28 Sade St., Passaic, N. J.
Dickson Co., 7420 Woodlawn Ave., Chicago 19, Ill.
Dickson Weatherproof Nail Co., P. O. Box 590, Evanston, Ill.
Dieckmann Co., Ferdinand, 1180 Harrison Ave., Cincinnati 22, Ohio.
Diehl Mfg. Co., 1117 Finderne Av., Somerville, N. J.
Dielectric Products Corp., Inc., 125 Virginia Ave., Jersey City 5, N. J.
Diesel Oil Burner Corp., 105-20 New York Blvd., Jamaica, N. Y.
Dietz Co., Henry G., 12-16 Astoria Blvd., Long Island City 2, N. Y.
Disston & Sons, Inc., Henry, Unruh & Milnor Sts., Philadelphia 35, Pa.
Division Lead Co., 7742 W. 61st Pl., Summit, Ill.
DoAll Co., 254 Laurel Ave., Des Plaines, Ill.
Dockson Corp., 3839 Wabash Av., Detroit 8, Mich.
Dodge Brothers, 7900 Jos. Campeau, Detroit, Mich.
Dodge Mfg. Corp., 500 S. Union St., Mishawaka, Ind.
Doelger & Kirsten, Inc., 3015 W. Chambers St., Milwaukee 10, Wis.
Dole Valve Co., 1933 W. Carroll Ave., Chicago 12, Ill.
Dollinger Corp., 11 Centre Park, Rochester 3, N. Y.
Domestic Mfg. Co., 201 Westlake, N., Seattle 1, Wash.
Dongan Electric Mfg. Co., 2981 Franklin St., Detroit 7, Mich.
Donley Bros. Co., 13932 Miles Ave., Cleveland, O.
Dormeyer Industries, 3418 Milwaukee Ave., Chicago 41, Ill.
Dornback Furnace & Foundry Co., 724 E. 103rd St., Cleveland 8, Ohio.
Dover Mfg. Co., Box 498, Independence, Mo.
Dow Chemical Co., Midland, Mich.
Dowagiac Steel Furnace Co., Beeson St., Dowagiac, Mich.
Downs-Smith Brass & Copper Co., Inc., 304-320 E. 45th St., New York 17, N. Y.
Doyle & Roth Mfg. Co., Foot of 23rd St., Brooklyn 32, N. Y.
Doyle Vacuum Cleaner Co., 225 Stevens St., S. W., Grand Rapids 2, Mich.
Dravo Corp., Chamber of Commerce Bldg., 411 Seventh Ave., Pittsburgh 19, Pa.
Drayer-Hanson, Inc., Box 2215, Terminal Annex, Los Angeles 54, Calif.
Dreis Co., Ltd., Edward J., 841 County Rd., San Carlos, Calif.
Dreis & Krump Mfg. Co., 7404 Loomis Blvd., Chicago 36, Ill.
Drico Industrial Corp., 559 W. 35th St., New York 1, N. Y.
Drilo, Inc., 201 E. Carson St., Pittsburgh, Pa.
Drying Systems, Inc., 1812½ W. Foster Ave., Chicago 40, Ill.
Dryomatic Corp., 812 N. Fairfax St., Alexandria, Va.
Dual-Air Fan Corp., P. O. Box 169, South Elgin, Ill.
Dualtron Co., 322 Perry Hwy., Pittsburgh 29, Pa.
Ducane Heating Corp., Lincoln Park, N. J.
Dunn-Rite Products, P. O. Box 297, Garden City, Mich.
Duo-Therm Div., Motor Wheel Corp., Lansing 3, Mich.
du Pont de Nemours & Co., Inc., E. I., Wilmington 98, Del.
Durex Refractories Co., 5252 Broadway, Chicago 40, Ill.
Duro-Dyne Corp., 38 S. Franklin St., Hempstead, L.I., N.Y.
Dust Suppression & Engineering Co., 154 Grove St., Lake Orion, Mich.
Dwyer Mfg. Co., F. W., 317 S. Western Av., Chicago 12, Ill.

E

Eagle Chemical Co., Inc., P. O. Box 1221, Joliet, Ill.
Eagle-Picher Co., American Bldg., Central Pkwy. & Walnut, Cincinnati 1, Ohio.
East Coast Co., 141 Milk St., Boston 9, Mass.
Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y.
Eastern Oil & Equipment Co., 27 Portland St., Portland 1, Maine.
Eastern Stainless Steel Corp., P. O. Box 1975, Baltimore 3, Md.
Easysheet Inc., 1601 Eastlake Av., Seattle 2, Wash.
Eav-Tex Co., 307 Lincoln Av., Havertown, Pa.
Ebco Mfg. Co., 401 W. Town St., Columbus 8, Ohio.
Eckhart Mfg. Co., Inc., 931 Lehigh Av., P. O. Box 248, Union, N. J.
Eclipse Air Brush Co., 390 Park Ave., Newark 7, N. J.
Eclipse Fuel Engineering Co., 1017 Buchanan St., Rockford, Ill.
Econo-Matic Products Co., Inc., 11805 Grand River Ave., Detroit 4, Mich.
Eddington Metal Specialty Co., P. O. Box K, Eddington, Pa.
Eddy Stoker Corp., 4717 W. North Av., Chicago 39, Ill.
Edwards Mfg. Co., Inc., 337 Eggleston Av., Cincinnati 2, Ohio.
Efsco Products Co., P. O. Box 154, Eastwood Sta., Syracuse 6, N. Y.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Eisbach, Albert N., 755 Central, Dubuque, Iowa.
Eisler Engineering Co., 761 S. 13th St., Newark 3, N. J.
Elco Tool & Screw Corp., 1800 Broadway, Rockford, Ill.
Electric Arc, Inc., 152 Jeliff Av., Newark 8, N. J.
Electric Controller & Mfg. Co., 2700 E. 79th St., Cleveland 4, Ohio.
Electric Furnace-Man, Inc., 4th & Furnace Sts., Emmaus, Pa.
Electric Machinery Mfg. Co., 1137 Tyler St., N. E., Minneapolis 13, Minn.
Electric Motor Corp., Div. Howard Industries, Inc., Racine, Wis.
Electric Soldering Iron Co., Inc., W. Elm St., Deep River, Conn.
Electric Sprayit Co., 1415 Illinois Av., Sheboygan, Wis.
Electrical Components Co., 600 S. 11th St., Newark 3, N. J.
Electriglas Corp., Bergenfield, N. J.
Electro Dustless Painting, Inc., 1052 New Britain Av., Elmwood 10, Conn.
Electroaire Corp., 37-40 12th St., Long Island City 1, N. Y.
Electro Dynamic Div., General Dynamics Corp., 163 Avenue A, Bayonne, N. J.
Electro Lift, Inc., 32 Church St., New York 7, N. Y.
Electro-Watt Inc., Mercer & Aurora, Seattle 9, Wash.
Electrol Burner Mfg. Co., Inc., 22 Union Av., Rutherford, N. J.
Electromode Corp., 45 Crouch St., Rochester 3, N. Y.
Electronic Products Co., St. Charles, Ill.
Electrovent Fan & Mfg. Co., 812 W. Lake St., Chicago 7, Ill.
Elgen Mfg. Corp., 41-34-39th St., Long Island City 4, N. Y.
Elgo Shutter & Mfg. Co., 2738 W. Warren Av., Detroit 8, Mich.
Ellison Draft Gage Co., 548 W. Monroe St., Chicago 6, Ill.
Elmwood Mfg. Co., 3145 Chestnut St., Detroit 7, Mich.
Elwell-Parker Elec. Co., 4131 St. Clair, Cleveland 3, Ohio.
Emerson Electric Mfg. Co., 8100 Florissant Av., St. Louis 21, Mo.
Emerson Radio and Phonograph Corp., 111 Eighth Ave., New York 11, N. Y.
Empire Chemical Products Co., 10 Longworth St., Newark, N. J.
Empire Door Co., Inc., 431 Southern Blvd., New York 55, N. Y.
Empire Metal Co., 820 E. Water St., Syracuse, N. Y.
Empire Stove Co., Belleville, Ill.
Empire Ventilation Equipment Co., 35-129 Vernon Blvd., Long Island City 1, N. Y.
Enderle, Inc., Ltd., Frank X., 1715 San Fernando Rd., Los Angeles 65, Calif.
Engel Sheet Metal Equipment, Inc., 3001 N. Union, St. Louis 15, Mo.
Engelhard, Inc., Chas., 850 Passaic Ave., East Newark, N. J.
Engineering Industries Co., Ltd., 650 Dupont St., Toronto, Ont., Canada.
Enico Products, 16573 Littefield Av., Detroit, Mich.
Enterprise Foundry, Inc., 1123 E. "B" St., Belleville, Ill.
Equi-Dyne, Inc., 5729 W. Ohio, Chicago 44, Ill.
Erdle Perforating Co., 171 York St., Rochester 11, N. Y.
Ergolyte Mfg. Co., 3627 N. Lawrence St., Philadelphia 40, Pa.
Erickson Specialty Co., 10 Cayuga St., P. O. Box 141, Cohoes, N. Y.
Eriez Mfg. Co., 7 E. 12th St., Erie, Pa.
Eselgroth & Co., 22 Edison Pl., Newark 2, N. J.
Ess Instrument Co., 96 S. Washington Ave., Bergenfield, N. J.
Essick Mfg. Co., 1950 Santa Fe Av., Los Angeles 21, Calif.
Eston Chemicals Div., American Potash & Chemical Corp., 3100 E. 26th St., Los Angeles, Calif.
Etched Products Co., 3901 Queens Blvd., Long Island City 4, N. Y.
Euclid Crane & Hoist Co., 1365 Chardon Rd., Euclid 17, Ohio.
Eutectic Welding Alloys Corp., 40-40 172nd St., Flushing, N. Y.
Evans Products Co., Heating & Appliance Div., Plymouth, Mich.
EverHot Heater Co., 5189 Wesson Av., Detroit 10, Mich.
Everhot Mfg. Co., 57 S. 19th Av., Maywood, Ill.
Everhot Products Co., 2059 W. Carroll Av., Chicago 12, Ill.
Eveready Supply Co., 3207 Gaston Av., Dallas 2, Texas.
Excel Heating & Air Conditioning Co., 3715 Belmont Av., Chicago 18, Ill.
Excelsior Steel Furnace Co., 118 S. Clinton St., Chicago 6, Ill.
Excelsior Stove & Mfg. Co., 510 S. Front St., Quincy, Ill.
Excelsior Tool & Machine Co., 31st & Ridge Av., East St. Louis, Ill.
Expert Welding Machine Co., 17144 Mt. Elliott St., Detroit, Mich.

F

F & E Mfg. Co., Box D, Centerville, Calif.
Fabricated Products Co., West Newton, Pa.
Fafnir Bearing Co., The, 37 Booth St., New Britain, Conn.
Fageol Heat Machine Co., 5725 Mt. Elliott Ave., Detroit 11, Mich.
Fairbanks, Morse & Co., 600 S. Michigan Av., Chicago 5, Ill.
Fairfield Oil Heating Co., Inc., Greenwich, Conn.
Fairmont Aluminum Co., P. O. Box 912, Fairmont, W. Va.
Fairmount Tool & Forging Co., 10611 Quincy Av., Cleveland 6, Ohio.
Fallsington Mfg. Co., Fallsington, Pa.
Falstrom Co., 18 Falstrom Court, Passaic, N. J.
Famous Furnace Co., 6420 Woodland Ave., Cleveland 4, Ohio.
Fanner Metals Products Co., 2323 E. 67th St., Cleveland, O.
Fano-Flame Oil Burner Co., 3323 Olive St., Huntington Park, Calif.
Farquhar Furnace Co., 230 Owens Av., Wilmington, Ohio.
Farr Co., Box 10187, Airport Sta., Los Angeles 45, Calif.
Farrelloy Co., 1243 N. 26th St., Philadelphia 21, Pa.
Farris Furnace Co., 920-930 Enos Av., Springfield, Ill.
Fasco Industries, Inc., Box 509, Rochester 2, N. Y.
Faultless Heater Corp., 10217 St. Clair Av., Cleveland, Ohio.
Favorite Stove Co., 440 Weber St., Piqua, Ohio.
Fayette Mfg. Co., Fayette, O.
Fedders-Quigan Corp., 57 Tonawanda St., Buffalo 7, N. Y.
Federal Machine & Welder Co., Overland Ave., Warren, Ohio.
Federal Machinery Co., 134 Grand St., New York 13, N. Y.
Federated Metals Div., American Smelting and Refining Co., 120 Broadway, New York 5, N. Y.
Fee & Mason Mfg. Co., Manasquan, N. J.
Fee & Stemwedel, Inc., 2210 Wabansia Av., Chicago 47, Ill.
Felters Co., Inc., 210 South St., Boston 11, Mass.
Fenway Machine Sales Co., Inc., 263 W. 23rd St., Philadelphia 3, Pa.
Ferdon Equipment Engineering Co., 26 Evans Place, Hillside, N. J.
Fern, Ralph, 2517 Boulevard Av., Scranton 9, Pa.
Field Control Div., H. D. Conkey & Co., Drawer 11, Mendota, Ill.
Fieser Co., F. J., 34 W. 21st St., New York 10, N. Y.
Figge Co., 1734 W. Ogden Av., Chicago 12, Ill.
Filkins, Inc., Edward, 9 S. Clinton St., Chicago 6, Ill.
Finger, Joe, 7907 Madison Av., Cleveland 2, Ohio.
Fingles Co., Reisterstown Rd. at Elgin Av., Baltimore 17, Md.
Finn Engineers, Inc., Jerry, 634 Grand Ave., St. Paul 5, Minn.
Fireline Stove & Furnace Lining Co., 1816 Kingsbury St., Chicago 14, Ill.
Firestone Industrial Products Co., Firestone Park, Akron 17, Ohio.
Firewel Co., Inc., 3685 Broadway, Buffalo 25, N. Y.
Fisher Brass Foundry, 5332 S. Santa Fe Ave., Los Angeles 11, Calif.
Fisher Governor Co., 203 First Av., Marshalltown, Iowa.
Flagler Corp., The, 19321 Filer Ave., Detroit, Mich.
Flame-Master Co., 6651 N. Clark St., Chicago, Ill.
Flemm Lead Co., Inc., Bradley Av. & School St., Long Island City 1, N. Y
Flexaust Co., The, 100 Park Ave., New York 17, N. Y.
Flexible Tubing Corp., Guilford, Conn.
Flexonics Corp., 1315 S. Third Ave., Maywood, Ill.
Flintkote Co., 30 Rockefeller Plaza, New York 20, N. Y.
Flood Co., Hudson, Ohio.
Floral City Heater Co., 402 S. Monroe St., Monroe, Mich.
Florence Stove Co., 205 School St., Gardner, Mass.
Floridin Co., Drawer 148, Warren, Pa.
Fluid Heat Div. Anchor Post Products, Inc., 6720 Eastern Av., Baltimore 24, Md.
Fluor Corp., Ltd., The, 2500 S. Atlantic Blvd., Los Angeles 22, Calif.
Flynn & Emrich Co., 301 Holliday St., Baltimore 2, Md.
Follansbee Steel Corp., 140 Stanwix St., Pittsburgh, Pa.
Folsom Snow Guard Co., 94 Hollis St., Holliston, Mass.
Foote Foundry Co., J. B., N. Main St., Fredericktown, Ohio.
Ford Chain Block Div., American Chain & Cable Co., Inc., York, Pa.
Ford Motor Co., Dearborn, Mich.
Forest City Foundries Co., Niagara Furnace Div. 2500 W. 27th St., Cleveland 13, Ohio.
Foster Engineering Co., 835 Lehigh St., Union, N. J.
Fox Noiseless Hammer Co., 77 Green Hill Rd., Media, Pa.
Foxboro Co., 38 Neponset Ave., Foxboro, Mass.
Fram Corp., Providence 16, R. I.
Franck & Fric, 7109 Kinsman Rd., Cleveland 4, Ohio.
Franklin Electric Co., Inc., E. Spring St., Bluffton, Ind.
Fraser & Johnston Co., 1900 17th St., San Francisco 3, Calif.
Frayn Co., N. J., P. O. Box 1005, Redwood City, Calif.
Frederick Iron & Steel, Inc., Frederick, Md.
Freed Products Co., 1510 Third Ave., Moline, Ill.
Fresh Air Circulator Co., 3108 Navigation, Houston 3, Texas.
Fresh'nd-Aire Co., 221 N. LaSalle St., Chicago 1, Ill.
Frey & Co., Frank P., 2634 W. Madison St., Chicago 12, Ill.
Frick Co., W. Main St., Waynesboro, Pa.
Friedrich Refrigerators, Inc., 1117 E. Commerce, San Antonio, Tex.
Friez Instrument Div., Bendix Aviation Corp., 1400 Taylor Av., Baltimore 4, Md.
Frigid, Inc., 128-168 Thirty-Second St., Brooklyn 32, N. Y.
Frigidaire Div., General Motors Corp., 300 Taylor St., Dayton, 1, Ohio.
Front Rank Furnace Co., Div. Liberty Foundry Co., 2500 Ohio Av., St. Louis 4, Mo.
Fry Reglet Corp., P. O. Box 411, Bremerton, Wash.
Fuel Reduction Corp., 220 N. Ada St., Chicago 7, Ill.
Fuel Savers, Inc., 1501 Herr St., Harrisburg, Pa.
Fuelguard Co., 5643 Dyer St., Dallas 6, Texas.
Fulton Sylphon Div., Robertshaw-Fulton Controls Co., Box 400, Knoxville 1, Tenn.
Furblo Co., Hermansville, Mich.
Furnas Electric Co., Batavia, Ill.
Fusion Engineering, 4504 Superior Ave., Cleveland 3, Ohio.
Fyne Aire Mfg. Co., 2125 N. Harwood St., Dallas, Tex.

G

G. M. Mfg. Co., 50 W. Third St., New York 12, N. Y.
GMC Truck & Coach Div., General Motors Corp., South Boulevard, Pontiac, Mich.
G. & O. Mfg. Co., 138 Winchester Av., New Haven 8, Conn.
G. & S. Machine Shop, 8700 Grinnell, Detroit 13, Mich.
Galvan Mfg. Co., Box 267, New Albany, Ind.
Garden City Fan Co., 332 S. Michigan Blvd., Chicago 4, Ill.
Garden City Laboratory, Div. Pritchardsons, 2744 W. 37th Pl., Chicago 32, Ill.
Garman Co., Inc., 9555 Breuer St., St. Louis 23, Mo.
Gary Steel Products Co., 4400 W. 9th St., Gary, Ind.
Gas Arc Supply, 223 N. 16th St., Philadelphia 2, Pa.
Gas & Oil Industry Laboratories, Inc., 4 Paine Av., Irvington 11, N. J.
Gasco Industries, Inc., 2054 National Bank Bldg., Detroit 26, Mich.
Gas-Posall Corp., 1730 Train Ave., Cleveland 13, O.
Gasinator Mfg. Co., 2108 Payne Ave., Cleveland, O.
Gates & Co., Inc., George W., Hempstead Tpke & Lucille Ave., Franklin Sq., L. I., N. Y.
Gates Rubber Co., 999 S. Broadway, Denver 17, Colo.
Gehri Co., 1117 Tacoma Ave., Tacoma 3, Wash.
Geisel Mfg. Inc., 61 West Av., Elyria, Ohio.
Gematic Burner Co., 16830 Miles Av., Cleveland 22, Ohio.
General Automatic Products Corp., 2300 Sinclair Lane, Baltimore, Md.
General Blower Co., 8600 Ferris Av., Morton Grove, Ill.
General Blower Co., Inc., 6137 Market St., Philadelphia 39, Pa.
General Bronze Corp., Stewart Ave., Garden City, L. I., N. Y.
General Ceramics & Steatite Corp., Keasbey, N. J.
General Chemical Div., Allied Chemical & Die Corp., 40 Rector St., New York 6, N. Y.
General Controls Co., 801 Allen Av., Glendale 1, Calif.
General Die and Stamping Co., 262 Mott St., New York 12, N. Y.
General Electric Co., Air Conditioning Div., 5 Lawrence St., Bloomfield, N. J.
General Electric Co., Carboloy Dept., 11177 E. Eight Mile Rd., Detroit 32, Mich.
General Electric Co., Chemical Div., 1 Plastics Ave., Pittsfield, Mass.
General Electric Co., 1 River Rd., Schenectady 5, N. Y.
General Electric Co., Lamp Div., Nela Park, Cleveland 12, Ohio.
General Engineering Co., Bay City, Mich.
General Filters, Inc., 43800 Grand River Ave., Novi, Mich.
General Fittings Co., 123 Georgia Ave., Providence 5, R. I.
General Gas Light Co., 202 N. Park St., Kalamazoo 11F, Mich.
General Machinery Co., 3500 Riverside Av., Spokane 1, Wash.
General Oil Heating Corp., 322-6 55th St., West New York, N. J.
General Plate Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
General Products Co., Fredericksburg, Va.
General Scientific Equipment Co., 27th & Huntington Sts., Philadelphia 32, Pa.

General Sheet Metal Works, Inc., Silliman Av. & Ash St., Bridgeport 5, Conn.
General Water Heater Corp., Front St., & Magnolia Blvd., Box 471, Burbank, Calif.
Generator Sales Co., 1627 N. Damen Ave., Chicago 47, Ill.
Gerett Corp., M. A. 724 W. Winnebago St., Milwaukee 5, Wis.
Gerhardt, W. F., 2007 W. Broad St., Richmond 20, Va.
Gerhardt Co., Inc., George T., P. O. Box 546, Sausalito, Calif.
Germatrol Corp., 622 Brookline Blvd., Pittsburgh 26, Pa.
Gerrard & Co., A. J, 1930 Hawthorne Ave, Melrose Park, Ill.
Gerstein & Cooper Co., Inc., 1 W. 3rd St., South Boston, Mass.
Gerwin Industries, Thermo-Base Div., 214 Spring St., Michigan City, Ind.
Giannini & Co., Inc., G. M., 254 W. Colorado St., Pasadena 1, Calif.
Gibson Refrigerator Co., 515 W. Williams, Greenville, Mich.
Gilbert & Barker Mfg. Co., West Springfield, Mass.
Gillen Co., J. L., 12202 Wormer Ave., Detroit 28, Mich.
Gilmore & Co., Jackson G., 167 E. State St., Columbus 15, Ohio.
Gisholt Machine Co., 1253 E. Washington Av., Madison 10, Wis.
Glasby Mfg. Co., Inc., J. P., Montgomery & Willett Sts., Belleville 9, N. J.
Glaser Lead Co., Inc., 31 Wyckoff Av., Brooklyn 37, N. Y.
Glasfloss, 155 E. 44th St., New York 17, N. Y.
Glass Fibers, Inc., 1810 Madison Ave., Toledo 2, O.
Glidden Co., 11001 Madison Av., Cleveland 2, Ohio.
Globe Machinery & Supply Co., E. 1st & Court Av., Des Moines 6, Iowa.
Globe Roofing Products Co., Inc., 2207 Schrage Av., Whiting, Ind.
Goder Incinerator Corp., 407 S. Dearborn, Chicago 5, Ill.
Goergen-Mackwirth Engineering Co., 813 Sycamore St., Buffalo 12, N. Y.
Goethel Sheet Metal Works, Inc., Alfred, 3218 W. Fond du Lac Av., Milwaukee 10, Wis.
Golden Gate Sheet Metal Works, 1422 14th Ave., Oakland 6, Calif.
Golden's Foundry & Machine Co., P. O. Box 96, Columbus, Ga.
Goldsmith Metal Lath Co., 4501 Chickering Ave., Cincinnati 32, Ohio.
Goodfellow Co., Inc., E. D., 496 E. Bodley Ave., Memphis, Tenn.
Goodrich Co., B. F., 500 S. Main St., Akron, Ohio.
Goodyear Tire & Rubber Co., Inc., 1144 E. Market St., Akron 16, Ohio.
Goss Gas, Inc., Rt. 8, Glenshaw, Pa.
Gouran, Mark F., 6308 Chew Ave., Philadelphia 38, Pa.
Governair Corp., 513 N. Blackwelder, Oklahoma City 4, Okla.
Graham Hambly Co., 3625 S. Grand Av., Los Angeles 7, Calif.
Grand Island Furnace & Supply Co., 356 N. Elm St., Grand Island, Nebr.
Grand Rapids Wire Products Co., 503 Front Av., N. W., Grand Rapids 4, Mich.
Granite City Steel Co., 20th & Madison Av., Granite City, Ill.
Gray, G. L., 295 East St., P. O. Box 320, New Haven 3, Conn.
Gray & Dudley Co., 2300 Clifton Rd., Nashville, Tenn.
Gray Metal Products, Inc., 30 Carleton St., Rochester 3, N. Y.
Great National Air Conditioning Corp., Sub. U. S. Air Conditioning Corp., 342 Oklahoma Natural Bldg., Oklahoma City, Okla.
Green Colonial Furnace Co., 322 S. W. Third St., Des Moines 7, Iowa.
Green Fire Brick Co., A. P., Mexico, Mo.
Greenberg's Sons, M., 765 Folsom St., San Francisco 7, Calif.
Greene, Tweed & Co., North Wales, Pa.
Greenheck Bros. Mfg. Co., Schofield, Wis.
Griswold Mfg. Co., 1001-1065 W. 12th St., Erie, Pa.
Grob Bros., Inc., Grafton, Wis.
Gross-Aire Mfg Co., 9416 W. Milton Ave., St. Louis 14, Mo.
Grove Regulator Co., 6529 Hollis St., Oakland, Calif.
Guardian Electric Mfg. Co., 1621 W. Walnut St., Chicago 12, Ill.
Guardian Products Corp., 1215 E. 2nd St., Michigan City, Ind.
Gustin-Bacon Mfg. Co., 210 West 10th St., Kansas City 7, Mo.

H

H. A. Mfg. Co., 1612 W. King St., York, Pa.
H-B Instrument Co., American & Bristol Sts., Philadelphia 40, Pa.
H & H Research Co., 6303 Horatio Ave., Detroit 10, Mich.
H-P Products, Inc., 510 W. Broad St., Louisville, Ohio.
H P L Mfg. Co., 15210 Miles Av., Cleveland 28, Ohio.
Haertel Co., Walter, 2840 - 4th Ave., S., Minneapolis, Minn.
Hago Products, 1281 Springfield Ave., Irvington 11, N. J.
Hague & Co., Alfred, 224 34th St., Brooklyn 32, N. Y.
Haines Gauge Co., Inc., 2301 W. Allegheny Av., Philadelphia 32, Pa.
Hall-Neal Furnace Co., 1326 N. Capitol Ave., Indianapolis 7, Ind.
Hallemite Mfg. Co., 2446 W. 25th St., Cleveland 13, O.
Hallmor, Inc., McMurray Rd., Bridgeville, Pa.
Halstead & Mitchell, Bessemer Bldg., Pittsburgh 22, Pa.
Hamler Boiler & Tank Co., 6025 W. 66th St., Chicago, Ill.
Hammel Radiator Engineering Co., 3348 Motor Av., Los Angeles 34, Calif.
Hammett Electric Mfg. Co., 706 E. Eighteenth St., Kansas City 8, Mo.
Hammond Machinery Builders, Inc., 1694 Douglas Av., Kalamazoo 54, Mich.
Handees Co., Dept. R-161, Bloomington, Ill.
Handelan Washed Air Co., 4006 Washburn Av., South, Minneapolis, Minn.
Handley-Brown Heater Co., 2501 Brooklyn Rd., Jackson, Mich.
Handy & Harman, 82 Fulton St., New York 38, N. Y.
Haney Gas Burner & Engrs., 909 S. Myrtle Ave., Monrovia, Calif.
Hanlan Co., 1416 W. Jefferson Blvd., Los Angeles 7, Calif.
Hanovia Chemical & Mfg. Co., 100 Chestnut St., Newark 5, N. J.
Hansen Gas & Electric Co., 680 Valencia St., San Francisco 10, Calif.
Harnischfeger Corp., 4400 W. National Ave., Milwaukee 46, Wis.
Harper Co., H. M., 8200 Lehigh Ave., Morton Grove, Ill.
Harrington Co., The, 1640 W. Callowhill St., Philadelphia 30, Pa.
Harrington & King Perforating Co., 5649 Fillmore St., Chicago 44, Ill.
Harris, A. R., 4546 Hohman Ave., Hammond, Ind.
Harris Calorific Co., 5501 Cass Av., N. W., Cleveland 2, Ohio.
Harris Machinery Co., 501 30th Ave., S. E., Minneapolis 14, Minn.
Harrison Sheet Steel Co., 4718 W. Fifth Av., Chicago 44, Ill.
Harry Cooling Towers, Inc., 125 Cedar St., New York 6, N. Y.
Hart & Cooley Mfg. Co., 500 E. Eighth St., Holland, Mich.
Hart & Crouse Corp., 109 N. Warner St., Oneida, N. Y.
Hart Heat Div., Avery Farm Machinery Co., 2006 S. Washington St., Peoria 2, Ill.
Hart Mfg. Co., Bartholomew & Hamilton Sts., Hartford 1, Conn.
Hartwell Co., 9035 Venice Blvd., Los Angeles 34, Calif.
Hartzell Propeller Fan Co., Div. Castle Hills Corp., 1025 Roosevelt Av., Piqua, Ohio.
Harvey Machine Co., Inc., 19200 S. Western Av., Torrence, Calif.
Harvey, Inc., Sid, 100 E. Mineola Av., Valley Stream, N. Y.
Harvey-Whipple, Inc., 55 Emery St., Springfield 1, Mass.
Hasko Utilities Co., 879 Tenth Ave., New York 19, N. Y.
Haskins Co., R. G., 2651 W. Harrison St., Chicago 12, Ill.
Hassall, Inc., John, Clay & Oakland Sts., Brooklyn 22, N. Y.
Hastings Air Conditioning Co., Inc., Box 474, 108 S. Colorado Av., Hastings, Nebr.
Hastings Instrument Co., Inc., Superhighway at Pine Ave., Hampton, Va.
Hauck Mfg. Co., 124-136 Tenth St., Brooklyn 15, N. Y.
Hauserman Co., E. F., 6800 Grant Av., Cleveland 5, Ohio.
Haveg Corp., Newark, Del.
Havens Structural Steel Co., 1713 Crystal Ave., Kansas City, Mo.
Hayes Furnace & Mfg. & Supply Co., 2929 S. Fairfax Ave., Los Angeles 16, Calif.
Hays Corp., 782 E. Eighth St., Michigan City, Ind.
Hays Mfg. Co., 801 W. 12th St., Erie 6, Pa.
Health Trola Div., Excel Heating & Air Cond. Co., 3715 Belmont Ave., Chicago 18, Ill.
Healy-Ruff Co., 765 Hampten Av., St. Paul 4, Minn.
Heartley Machine & Tool Co., 900-8 Summit St., Toledo, Ohio.
Heatcraft Co., 419 W. Main St., Louisville 2, Ky.
Heating Assurance, Inc., 124 E. Augusta Av., Spokane 13, Wash.
Heating Equipment Mfg Co., 600 Indiana St., San Francisco 7, Calif.
Heating Specialties Co., Carroll P. O., Baltimore 29, Md.
Heating Wholesalers Co., 107 S. W. Second Ave., Des Moines 5, Ia.
Heat-Seal Burner Co., 2018 Cuming Av., Omaha 2, Nebr.
Heat-Timer Corp., 657 Broadway, New York 12, N. Y.
Heat-X-Changer Co., The, Brewster, N. Y.
Heetrliter Co., 208 S. Blaine St., Newberg, Ore.
Hegeler Zinc Co., P. O. Box 599, Danville, Ill.
Heidrich-Nourse Co., 631 E. 3rd St., Los Angeles 13, Calif.
Heil Co., 3000 W. Montana St., Milwaukee 1, Wis.
Heil Process Equipment Corp., 12901 Elmwood Ave., Cleveland, O.
Heimback Incinerator Mfg. Co., St. Paul, Minn.
Heinrich Tools, Inc., 1536 Clark St., Racine, Wis.
Hemp & Co., Inc., Macomb, Ill.
Hemphill Co., A. D., Lake City, Minn.
Henderson & Co., Peter, 35 Cortland St., New York 7, N. Y.
Henderson Furnace & Mfg. Co., Sebastopol, Calif.
Hendley & Whittemore Co., 6 Blackhawk Blvd., Beloit, Wis.

Hendrick Mfg. Co., 37 Dundaff St., Carbondale, Pa.
Henkel-Clauss Co., Fremont, Ohio.
Henry Furnace Co., Medina, Ohio
Henry Valve Co., Melrose Park, Ill.
Henry & Wright Div., Emhart Mfg. Co., 760 Windsor St., Hartford 1, Conn.
Herbster Products Co., 5309 Euclid Ave., Cleveland 3, O.
Herco Oil Burner Corp., 131-135 Locust St., Lancaster, Pa.
Hercules Chemical Co., Inc., 332 Canal St., New York 13, N. Y.
Hercules Electric & Mfg. Co., Inc., 2300 Atlantic Av., Brooklyn 7, N. Y.
Herrick Grate Co., Geo. S., 110 Liberty St., Syracuse 4, N. Y.
Herron-Zimmers Molding Co., 3900 E. Outer Drive, Detroit, Mich.
Hershey Machine & Foundry Co., Manheim, Pa.
Hess Co., The, 1855 S. 54th Ave., Chicago 50, Ill.
Hetzel Roofing Products Co., 67 Main St., Newark 5, N. J.
Hexacon Electric Co., 275 W. Clay Ave., Roselle Park, N. J.
Hexdall Co., A. M., Morris, Ill.
Highland Engineering Co., 1742 Berkeley St., Santa Monica, Calif.
Highside Chemicals Co., 10 Colfax Ave., Clifton, N. J.
Hill & Co., E. Vernon, P. O. Box 189, Lake Geneva, Wis.
Hillwood Mfg. Co., 21700 St. Clair Av., Cleveland 17, Ohio.
Hilo Varnish Corp., 376 Third St., Everett 49, Mass.
Hinde & Dauch Paper Co., P. O. Box 861, Sandusky, Ohio.
Hi-Qua Mfg. Co., 4709 Griscom St., Philadelphia 24, Pa.
Hirsh Mfg. Co., P. O. Box 265, Garland, Texas.
Hirschman-Pohle Co., Inc., 9 Lent Av., LeRoy, N. Y.
Hobart Bros. Co., Canal Lock Square, Troy 1, Ohio.
Hobsite Products Co., Inc., 308 Sussex St., Harrison, N. J.
Hodell Chain Co., 3924 Cooper Av., Cleveland 3, Ohio.
Holan Corp., J. H., 4100 W. 150th St., Cleveland, O.
Hold-Tite Valve Mfg. Co., 550 Fifth Ave., New York 36, N. Y.
Holden Fan Co., 2503 Danforth, Detroit 12, Mich.
Holland Furnace Co., Holland, Mich.
Hollup Corp., Div. National Cylinder Gas Co., 4700 W. 19th St., Chicago 50, Ill.
Holly Mfg. Co., 875 S. Arroyo Parkway, Pasadena 2, Calif.
Holtzer-Cabot Electric Motor Div. National Pneumatic Co., Inc., 125 Amory St., Boston 19, Mass.
HomEase Products Div., Inc., Bogue Electric & Mfg. Co., 52 Iowa Av., Paterson 3, N. J.
Home Furnace Co., 280 E. 6th St., Holland, Mich.
Homer Furnace & Foundry Corp., Coldwater, Mich.
Hones, Inc., Charles A., 122 S. Grand Av., Baldwin, N. Y.
Horn Co., Inc., A. C. 10th St. & 44th Av., Long Island City 1, N. Y.
Horsman-Markin Corp., 2063 Penobscot Bldg., Detroit 26, Mich.
Hossfeld Mfg. Co., 460 W. Third St., Winona, Minn.
Hotentot Co., Inc., 2423 Farnham St., Omaha 2, Nebr.
Hotpoint Co., 5600 W. Taylor St., Chicago 44, Ill.
Hotstream Heater Co., 2363 E. 69th St., Cleveland 4, Ohio.
Houston Blow Pipe & Sheet Metal Works, 113 Broadway, Houston 1, Texas.
Howard Iron Wks. & Alberger Heater Div., 287 Chicago St., Buffalo 4, N. Y.
Howes-Woods Co., 210 Bridge St., Cambridge 41, Mass.
Hoyt Heater Co. of No. Calif., 926 High St., Oakland, Calif.
Hub Specialty Co., 53 Salem St., Reading, Mass.
Hubbell Corp., Box 700, Hawley Rd., Mundelein, Ill.
Huck Mfg. Co. 2480 Bellevue Av., Detroit 7, Mich.
Hugert Mfg. Co., Rt. 3 & Chippewa Lake Rd., Medina, Ohio.
Hunt Heater Corp., 220 Twelfth Ave., N., Nashville, Tenn.
Hunt & Son, Inc., C. B, Salem, Ohio
Hunter Fan & Ventilating Co., 400 S. Front St., Memphis 2, Tenn.
Hupp Corp., Globe Stamping Div., 1250 W. 76th St., Cleveland 2, Ohio.
Hussey & Co., C. G., 2850 Second Av., Pittsburgh 19, Pa.
Hutchinson Burner & Mfg. Co., 517 N. Main, Hutchinson, Kans.
Huwer Heating Corp., R. R. 2, Milford, Mich.
Hydrovalve Co., 1319 Utica Ave., Brooklyn 3, N. Y.
Hyman & Sons, Joseph, Tioga, Livingston and Almond St., Philadelphia 34, Pa.
Hynes & Cox Electric Corp., Cohoes Rd. & Elm St., Watervliet, N. Y.

I

Ideal Electric & Mfg. Co., E. First & Oak Sts., Mansfield, Ohio.
Ideal Industries, Inc., 1084 Park Av., Sycamore, Ill.
Iden Associates, 1805 N. Milwaukee Av., Chicago 47, Ill.
Ilg Electric Ventilating Co., 2850 N. Crawford Av., Chicago 41, Ill.
Illinois Bronze Powder Co., Inc., 2023 S. Clark St., Chicago 16, Ill.
Illinois Iron & Bolt Co., Freeman Heating Div., 914 S. Michigan Av., Chicago 5, Ill.
Illinois Testing Laboratories, Inc., 420 N. LaSalle St., Chicago 10, Ill.
Illinois Zinc Co., 2959 W. 47th St., Chicago 32, Ill.
Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago 7, Ill.
Imperial Electric Co., 64 Ira Av., Akron 9, Ohio.
Incinerator Products Co., 667 S. Post, Detroit, Mich.
Independence Stove & Mfg. Co., Cor. Hayward & Cottage, Independence, Mo.
Independent Nail & Packing Co., P. O. Box N. Bridgewater, Mass.
Independent Register Co., 3747 E. 93rd St., Cleveland 5, Ohio.
Industrial Brownhoist Corp., 135 Washington, Bay City, Mich.
Industrial Engineering Corp., 206 N. Ninth St., Terre Haute, Ind.
Industrial Metal Protectives, 401 Homestead Av., Dayton, Ohio.
Industrial Screw Co., 711 W. Lake St., Chicago 6, Ill.
Industrial Service Laboratories, 710 W. National Ave., Milwaukee 4, Wis.
Infra Insulation Inc., 525 Broadway, New York, N. Y.
Ingersoll Products Div., Borg-Warner Corp., 760 E. Vine St., Kalamazoo, Mich.
Ingersoll-Rand Co., 11 Broadway, New York 4, N. Y.
Ingersoll Steel Div., Borg-Warner Corp., 310 S. Michigan Ave., Chicago 4, Ill.
Ingram Machinery Co., P. O. Box 305, Ficher, Okla.
Inland Steel Co., 38 S. Dearborn St., Chicago 3, Ill.
Inland Steel Container Co., 6532 S. Menard St., Chicago 38, Ill.
Inland Steel Products Co., 4023 W. Burnham St., Milwaukee 1, Wis.
Insto-Gas Corp., 1977 E. Woodbridge St., Detroit 7, Mich.
Insul-Mastic Corp. of America, Oliver Bldg., Pittsburgh, Pa.
Insulating Castable Corp., 130 W. Pleasant Ave., River Rouge 18, Mich.
Insulating Equipment, Inc., 39 S. LaSalle St., Chicago 3, Ill.
Insulation & Refractories Co., Williamson, N. Y.
Insulite Div., Minnesota and Ontario Paper Co., 500 Baker Arcade Bldg., Minneapolis 2, Minn.
Inter-Coastal Paint Co., 15th & Southern R. R. East St. Louis, Ill.
International Engineering, Inc., 1145 Bolander, Dayton 1, Ohio.
International Harvester Co., Truck Div., 108 N. Michigan, Chicago, Ill.
International Heater Co., 101 Park Av., Utica 2, N. Y.
International Mfg. Co., 600 E. Grand, Oklahoma City, Okla.
International Metal Products Co., P. O. Box 1712, Phoenix, Ariz.
International Nickel Co., Inc., 67 Wall St., New York 5, N. Y.
International Oil Burner Co., Park & Spring, St. Louis 10, Mo.
International Register Co., 2620 W. Washington Blvd., Chicago 12, Ill.
International Rolling Mill Products Corp., 5000 S. Whipple St., Chicago, Ill.
International Sales Co., 2045 Evans Av., San Francisco 24, Calif.
International Steel Co., 1556 Edgar St., Evansville, Ind.
International Vermiculite Co., Girard, Ill.
Interstate Drop Forge Co., 4051 N. 27th St., Milwaukee, Wis.
Interstate Machinery Co., Inc., 1433 W. Pershing Road, Chicago 9, Ill.
Interstate Sales Co., 123 E. 18th St., New York 3, N. Y.
Iona Ventilator Co., Inc., 2821-29 W. Dauphin St., Philadelphia 32, Pa.
Iowa Paint Mfg. Co., Inc., 118-20 Eighth St., Des Moines 9, Iowa.
Iron City Chemical Co., Glycolator Div., Valencia, Pa.
Iron Lung Ventilator Co., 5403 Prospect Ave., Cleveland 3, Ohio.
Iron Fireman Mfg. Co., 3121 W. 106th St., Cleveland 11, Ohio.
Iron-Hide Sales Co., Dock St., Matawan, N. J.
Irvington Varnish & Insulator Div., Minnesota Mining & Mfg. Co., 6 Argyle Terrace, Irvington 11, N. J.
Isolantite Products Co., 1723 First Ave., S., Seattle 4, Wash.

J

J & J Sheet Metal Co., 23836 Hoover Rd., Van Dyke, Mich.
Jabsco Pump Co., 2031 N. Lincoln, Burbank, Calif.
Jack & Heintz, Inc., 17600 Broadway, Cleveland 1, Ohio.
Jackes-Evans Mfg. Co., 4427 Geraldine Ave., St. Louis 15, Mo.
Jackson & Church Co., 321 N. Hamilton St., Saginaw 65, Mich.
Jaco Devices Co., 98 High St., Hingham, Mass.
James Regulator Co., Inc., 2nd & Pine Sts., Hamburg, Pa.
Jamestown Metal Corp., 104 Blackstone Av., Jamestown 6, N. Y.
Jan-Air Inc., Richmond, Ill.
Jefferson Electric Co., 25th & Madison St., Bellwood, Ill.
Jefferson Machine Tool Co., Fourth, Cutter & Sweeney Sts., Cincinnati 3, Ohio.
Jenn Air Products Co., 409 Architects Bldg., Indianapolis 4, Ind.

Jessop Steel Co., Washington, Pa.
Jessup Signal Gauge Co., 1390 W. Minnehaha Pkwy., Minneapolis 9, Minn.
Jet-Heet, Inc., 152 S. Van Brunt St., Englewood, N. J.
Jettronaire, Inc., 1100 E. Warrington, Pittsburgh 10, Pa.
Johns-Manville, 22 E. 40th St., New York 16, N. Y.
Johnson Co., S. T., 940 Arlington Ave., Oakland 8, Calif.
Johnson Corp., The, 806 Wood St., Three Rivers, Mich.
Johnson Gas Appliance Co., 520 "E" Av., N. W., Cedar Rapids, Iowa.
Johnson Heater Corp., 1 Winnisimet St., Chelsea, Mass.
Johnson, Inc., William, Brenner & Kent Sts., Newark 3, N. J.
Johnson Ladder Shoe Co., Eau Claire, Wis.
Johnson Machine & Press Corp., 620 W. Indiana Av., Elkhart, Ind.
Johnson Mfg. Co., Inc., Mount Vernon, Iowa.
Johnson Service Co., 507 E. Michigan St., Milwaukee, Wis.
Johnston & Chapman Co., 2925 Carroll Ave., Chicago 12, Ill.
Johnston Foil Mfg. Co., 6100 S. Broadway, St., Louis 11, Mo.
Johnston Gas Furnace Corp., Ltd., 11847 Vose St., North Hollywood, Calif.
Jones & Laughlin Steel Corp., 3 Gateway Center, Pittsburgh 30, Pa.
Jones Foundry & Machine Co., W. A., 4401 W. Roosevelt Rd., Chicago 24, Ill.
Jordan & Co., Inc., Paul R., 311 E. South St., Indianapolis 25, Ind.
Jordon Refrigerator Co., Inc., 58th St. & Grays Ave., Philadelphia 43, Pa.
Joy Mfg. Co., Oliver Bldg., Pittsburgh 22, Pa.
Junior Co., J. C., 444 E. 63rd St., Kansas City, Mo.
Juniper Elbow Co., Inc., 72-15 Metropolitan Av., Middle Village, L. I., N. Y.
Justrite Mfg. Co., 2061 N. Southport Ave., Chicago, Ill.

K

Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif.
Kalamazoo Furnace & Appliance Mfg. Co., Rochester Ave., Kalamazoo, Mich.
Kane & Roach, Inc., Niagara & Shonnard Sts., Syracuse 4, N. Y.
Katelman Foundry & Mfg. Co., Third Av. & Eleventh St., Council Bluffs, Iowa.
Kauffman Air Conditioning Corp., 4505 Olive St., St. Louis 8, Mo.
Kaufman Co., H. J., 13215 Roselawn Ave., Detroit 4, Mich.
Kaustine Furnace & Tank Corp., 1492 Washington Ave., Perry, N. Y.
Kawneer Co., Niles, Mich.
Keasbey & Mattison Co., Butler Av., Ambler, Pa.
Keasbey Co., Robert A., 139 W. 19th St., New York 11, N. Y.
Keckley Co., O. C., 400 W. Madison St., Chicago 6, Ill.
Keith Furnace Co., Dean Av., at E. 26th, Des Moines 17, Iowa.
Keller Tool Co., P. O. Box 268, Grand Haven, Mich.
Kelvinator Div., Nash-Kelvinator Corp., 14250 Plymouth Rd., Detroit 32, Mich.
Ken-Joy Gas Burner Co., 3231 W. National Av., Milwaukee 15, Wis.
Kenmore Machine Products, Inc., Lyons, N. Y.
Kennametal Inc., Latrobe, Pa.
Kennard Corp., 1819 S. Hanley Rd., St. Louis 17, Mo.
Kensico Tube Co., Mt. Kisco, N. Y.
Kent Co., Inc., 435 Canal St., Rome, N. Y.
Kerentoff, G. L., 2218 Reading Road, Cincinnati 2, Ohio.
Kerner Incinerator Div., Morse-Boulger Destructor Co., 205 E. 42nd St., New York 17, N. Y.
Kerotest Mfg. Co., 2525 Liberty Av., Pittsburgh 22, Pa.
Kester Solder Co., 4201 Wrightwood Av., Chicago 39, Ill.
Keystone Asphalt Products Co., 101 E. Ontario St., Chicago 11, Ill.
Keystone Flashing Co., 2310 N. 28th St., Philadelphia 32, Pa.
Kidder Mfg. Co., Inc., J. F., 426 Colchester Av., Burlington, Vt.
Kilbury Mfg. Co., Inc., 14529 Hawthorne Blvd., Lawndale, Calif.
Kilgore, Inc., Westerville, O.
Killam Gas Burner Co., 260 Broadway, Denver 9, Colo.
Kimberly-Clark Corp., Neenah, Wis.
Kindl-Aire Corp., 1480 W. 112th St., Cleveland 2, Ohio.
Kindt-Collins Co., 12653 Elmwood Ave., Cleveland 11, Ohio.
King Metal Co., 414 N. W. Fourth St., Oklahoma City 3, Okla.
King Co., Box 178, Owatonna, Minn.
Kingston-Conley Div., Hoover Co., 70 Brook Ave., North Plainfield, N. J.
Kingston Products Corp., Tipton Div., Tipton, Ind.
Kirk & Blum Mfg. Co., 3120 Forrer St., Cincinnati 9, O.
Kirk & Son, Inc., Morris P., 2717 S. Indiana St., Los Angeles 23, Calif.
Klauer Mfg. Co., 9th & Washington St., Dubuque, Iowa.
Kleenair Furnace Co., 5329 N. E. Sandy Blvd., Portland 13, Ore.
Kleen-Heet, Inc., 1829 Carroll Av., Chicago 12, Ill.
Kleer-Kleen Mfg. Co., 901-72nd Ave., Oakland 21, Calif.
Klem Chemicals, Inc., 14401 Lanson Av., Dearborn, Mich.
Klenk's Aviation Snips, 107 E. 5th St., Wilmington, Del.
Kling Bros. Engineering Works, 1320 N. Kostner Ave., Chicago 51, Ill.
Klipfel Mfg. Co., 1075 Lincoln Ave., Hamilton, Ohio.
Kloppenborg Aluminum Foundry, 211 Marquette St., Davenport, Iowa.
Knights Co., James, Sandwich, Ill.
Knowles Mushroom Ventilator Co., 583 Upper Mountain Ave., Upper Montclair, N. J.
Kol-Master Corp., Oregon, Ill.
Kolb Refractories Co., Meadow & Jackson Sts., Philadelphia, Pa.
Kool Air Engineering Co., 1388 Fairfax Dr., San Bernardino, Calif.
Koolvent Metal Awning Corp., of America, 324 Fourth Av., Pittsburgh 22, Pa.
Koppers Co., Inc., Tar Products Div., Koppers Bldg., Pittsburgh 19, Pa.
Korfund Co., 48-01-A 32nd Pl., Long Island City 1, N. Y.
Ko-Z-Aire Products, Inc., Red Oak, Iowa.
Kraissl Co., Inc., Terhune & Willams Avs., Hackensack, N. J.
Kramer Bros. Foundry Co., 17 Dell St., Dayton 4, Ohio.
Kramer Trenton Co., N. Olden & Breunig Ave., Trenton 5, N. J.
Kraus Mfg. Co., Chas. E., 122 S. 8th St., Louisville 2, Ky.
Kresky Mfg. Co., Inc., Second & H Sts., Petaluma, Calif.
Kresno-Stamm Co., 345 Commercial Ave., Palisades Park, N. J.
Krueger Air Conditioning Co., 19 E. Rillito St., Tucson, Ariz.
Krueger Sentry Gauge Co., Green Bay, Wis.
Kwikheat Mfg. Co., 3732 San Fernando Rd., Glendale 4, Calif.

L

Laclede-Christy Co., 310 S. Michigan Av., Chicago 4, Ill.
Laclede Steel Co., Arcade Bldg., St. Louis 1, Mo.
Laco Oil Burner Co., Inc., 238 Union St., Griswold, Iowa.
LaCrosse Steel Roofing & Corrugating Co., 227 Jay St., LaCrosse, Wis.
LaHarco Industries, Lyndale and 2nd Av., N., Minneapolis, Minn.
Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, Ill.
Lakewood Engineering & Mfg. Co., 1756 W. Lake St., Chicago 12, Ill.
Lamb Electric Co., 627 Lake St., Kent, Ohio.
Lamb & Ritchie Co., 250 Albany St., Cambridge 39, Mass.
Lammert & Mann Co., Wood & Walnut Sts., Chicago 12, Ill.
Lander & Abbott, La Crescenta, Calif.
Landis & Gyr, Inc., 45 W. 45th St., New York 36, N. Y.
Lane Shur-Grip Tool Co., 1420 S. Michigan Ave., Chicago 5, Ill.
Langsenkamp Co., F. H., 229 E. South St., Indianapolis 25, Ind.
Lapeer Mfg. Co., 1144 W. Baltimore, Detroit 2, Mich.
Larkin Coils, Inc., 519 Memorial Dr., S. E., Atlanta 1, Ga.
Lasko Metal Products, Inc., 438 W. Gay St., West Chester, Pa.
Lastik Products Co., Inc., 203 Iroquois Bldg., Pittsburgh 13, Pa.
Lau Blower Co., 2005 Home Av., Dayton 7, Ohio.
Lawson Mfg. Co., 300 N. Lexington Av., Pittsburgh 8, Pa.
Leas Co., H. Leslie, Monona, Iowa.
Ledcote Products Co., 35-01 Vernon Blvd., Long Island City 1, N. Y.
Lee Co., K. O., Congress at 1st, Aberdeen, S. Dak.
Lee Corporation, 1011 Tatnall St., Wilmington, Del.
Lee & Son Co., Thomas, 128-132 W. Second St., Cincinnati 2, Ohio.
Leeds & Northrup Co., 4970 Stenton Ave., Philadelphia 44, Pa.
Leeson Air Conditioning Corp., 14631 Meyers Rd., Detroit 27, Mich.
Lehigh Fan & Blower Co., 730 N. 17th St., Allentown, Pa.
Lehigh Mfg. Co., P. O. Box 1418, Lancaster, Pa.
Lehon Co., 4425 S. Oakley Av., Chicago 9, Ill.
Leisur-Maid Mfg. Corp., 338 Wealthy St., S. W., Grand Rapids 3, Mich.
Lenk Mfg. Co., 30-38 Cummington St., Boston 15, Mass.
Leland Electric Co., Div. American Machine & Foundry Co., 1501 Webster St., Dayton 1, Ohio.
Lennox Furnace Co., 200 S. 12th Av., Marshalltown, Iowa; 1705 Olentagy River Rd., Columbus, Ohio; 400 N. Midler Av., Syracuse, N. Y.
Leslie Welding Co., Inc., 2943 Carroll Ave., Chicago 12, Ill.
Levow, David, 308 W. 20th St., New York 11, N. Y.
Lewellen Mfg. Co., Columbus, Ind.
Lewin-Mathes Co., Lewin Metals Div., 12th & Chateau Sts., St. Louis 2, Mo.
Lexsuco, Inc., 4815 Lexington Ave., Cleveland 3, Ohio.

L'Hommedieu & Sons Co., Chas. F., 4521 Ogden Av., Chicago 23, Ill.
Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.
Libert Machine Co., 324 N. Roosevelt St., Green Bay, Wis.
Liberty Combustion Corp., 240 Court St. Rd., P. O. Box 300, Syracuse 1, N. Y.
Lignum-Vitae Products Corp., 906 Boyd Av., Jersey City, N. J.
Lilie-Hoffmann Cooling Towers, Inc., 4239 Duncan Ave., St. Louis 10, Mo.
Lima Electric Motor Co., Dept. 10, Lima, O.
Lima Register Co., 651 N. Baxter St., Lima, Ohio.
Lincoln Brass Works, 2067-12th St., Detroit, Mich.
Lincoln Electric Co., 22801 St. Clair Av., Cleveland 17, Ohio.
Lincoln Machine Co., Livermore Falls, Maine.
Linde Air Products Co., Div. Union Carbide & Carbon Corp., 30 E. 42nd St., New York 17, N. Y.
Lindsay Structure, Inc., 5000 W. Dempster St., Skokie, Ill.
Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill.
Lipman Refrigeration Div., Yates-American Machine Co., Beloit, Wis.
Liquid Carbonic Corp., Industrial Gas Div., 3100 S. Kedzie Av. Chicago 23, Ill.
Liquidepth Indicators, Inc., 43-22 Tenth St., Long Island City 1, N. Y.
Liquidometer Corp., Skillman Av., 36th and 37th Sts., Long Island City 1, N. Y.
Lisbon Hoist and Crane Co., Div. Wright File Co., Lisbon, Ohio.
Litman, Morris, 39 Cliftwood St., Springfield, Mass.
Little Burner Co., Inc., H. C. Woodland Ave. & Du Bois St., San Rafael, Calif.
Littleford Bros., Inc., 453 E. Pearl St., Cincinnati 2, Ohio.
Little Giant Vaporizer Co., 5101 Classen Blvd., Oklahoma City 6, Okla.
Little Janitor Furnace Clock Co., 621 Broadway, New York, N. Y.
Livingston, Inc., Kalamazoo Av., Marshall, Mich.
Locke Regulator Co., Walter and Osborne Sts., Salem, Mass.
Locke Stove Co., 114 W. 11th St., Kansas City 6, Mo.
Lockformer Co., 4615 Roosevelt Rd., Chicago 50, Ill.
Lockhart Mfg. Corp., 6350 E. Davison, Detroit, Mich.
Lockport Cotton Batting Co., Lockport, N. Y.
London Chemical Co., 325 W. 32nd St., Chicago, Ill.
Lonergan Mfg. Co., 704 Clark St., Albion, Mich.
Lord Mfg. Co., 1635 W. 12th St., Erie, Pa.
Los Angeles Gas Appliance Co., Inc., 3816 Medford St., Los Angeles 33, Calif.
Los Angeles Sheet Metal Mfg. Co., Inc., 900 E. Ninth St., Los Angeles 21, Calif.
Louden Machinery Co., 1454 Broadway, Fairfield, Iowa.
Louvra Corp., 1010 Jeanette Ave., Union, N. J.
Lovejoy Flexible Coupling Co., 5041 Lake St., Chicago 44, Ill.
Lovekin Water Heater Co., 21-43 Laurel St., Philadelphia 23, Pa.
Lucas & Co., Inc., John, 1617 Pennsylvania Blvd., Philadelphia, Pa.
Lufkin Rule Co., Saginaw, Mich.
Lug-All Co., The, 331 E. Lancaster Ave., Wynnewood, Pa.
Lukens Metal Co., Thos. F., Hedley & Bath Sts., Philadelphia 37, Pa.
Lukens Steel Co., 308 S. First Ave., Coatesville, Pa.
Lumm Co., A. H., 2512 Albion St., Toledo 6, Ohio.
Lundt, Inc., Ernest C., Route 6, P. O. Box 216, Little Falls, N. J.
Lustrik, Inc., 3324 Frankford Av., Philadelphia 4, Pa.
Luty Furnace Mfg. Co., 8747 Lyndon Ave., Detroit 38, Mich.
Lyman Co., H. B., Southampton, Hampshire Co., Mass.
Lynn Products Co., 17 Willow St., Lynn, Mass.
Lyon, Conklin & Co., Inc., Race & McComas St., Baltimore 30, Md.
Lyon Metal Products, Inc., 740 Madison Av., Aurora, Ill.
Lyons, Edward W., 115 W. Glenaven Ave., Youngstown 7, O.

M

MB Mfg. Co., Inc., 1060 State St., New Haven 11, Conn.
M & E Mfg. Co., 2581 W. Winthrop, Indianapolis 5, Ind.
Machine Rebuilding Co., 2738 Chene St., Detroit 7, Mich.
Machinery Liquidating Co., 2663 Michigan Ave., Detroit 16, Mich.
Madden Brass Products Co., 1111 N. Franklin St., Chicago 10, Ill.
Madden Corp., The, 1543 Morse Ave., Chicago, Ill.
Made-Rite Co., Inc., 10th & Monroe St., Newport, Ky.
Magic Chef, Inc., 1641 S. Kingshighway Blvd., St. Louis 10, Mo.
Magic Servant Products Co., 13211 Joy Rd., Detroit 28, Mich.
MaGirl Foundry & Furnace Co., 413 E. Oakland Ave., Bloomington, Ill.
Magnetool Div., Multifinish Mfg. Co., 2114 Monroe, Detroit 7, Mich.
Magnex Corp., 90-28 Van Wyck Expressway, Jamaica 18, N. Y.
Magnus Chemical Co., Garwood, N. J.
Mahl Mfg. Co., 3081 Slauson Ave., Huntington Park, Calif.
Mahon Co., R. C., 6565 E. 8 Mile Rd., Detroit 34, Mich.
Maid-O'-Mist Inc., 3217 N. Pulaski Rd., Chicago 41, Ill.
Majestic Co., Inc., 733 Erie St., Huntington, Ind.
Mall Tool Co., 7740 South Chicago Av., Chicago 19, Ill.
Malleable Iron Fittings Co., Lock Box 231, Branford, Conn.
Malm Mfg. Co., 1565 Como Ave., St. Paul, Minn.
Manhattan Perforated Metal Co., Inc., 43-17 37th St., Long Island City 1, N. Y.
Manheim Mfg. and Belting Co., Manheim, Pa.
Manning, Maxwell & Moore, Inc., 250 E. Main St., Stratford, Conn.
Maple City Furnace Co., 605 S. Main St., Monmouth, Ill.
Maplewood Machinery Co., 2634 Fullerton Ave., Chicago 47, Ill.
Marathon Electric Mfg. Corp., Cherry & Randolph Sts., Wausau, Wis.
Marble-Card Electric Co., Gladstone, Mich.
Marco Industries, Inc., 786 Terrace Blvd., DePew, N. Y.
Marietta Metal Products Corp., Marietta, Pa.
Marine Electrolysis Eliminator Co., 617 Dearborn St., Seattle, Wash.
Marion Metal Products, Marion, Ohio.
Markal Co., 3052 W. Carroll Ave., Chicago 12, Ill.
Market Forge Co., Everett 49, Mass.
Marley Co., Inc., 222 W. Gregory Blvd., Kansas City 5, Mo.
Marlo Coil Co., 6135 Manchester Av., St. Louis 10, Mo.
Marquart Mfg. Co., 1241 High St., Oakland 1, Calif.
Marquette Mfg. Co., Inc., 307 E. Hennepin Ave., Minneapolis 14, Minn.
Marsh Corp., Jas. P., Skokie, Ill.
Marsh Lumber Co., Inc., 535-611 Tuscarawas Ave., Dover, Ohio.
Marshall Furnace Co., Dobbins & Hanovers Sts., Marshall, Mich.
Marshalltown Mfg. Co., 901 E. Nevada St., Marshalltown, Iowa.
Martens & Stormoen Co., 231 Willard St., West Quincy 69, Mass.
Martin Fan & Blower Co., 4634 W. 21st Place, Chicago 50, Ill.
Martin Co., Inc., J. O., 637 Minna St., San Francisco 3, Calif.
Martin Stamping & Stove Co., Huntsville, Ala.
Marvin Mfg. Co., 3071 E. 12th St., Los Angeles 23, Calif.
Mason Machine Co., Inc., 817 E. King St., York, Pa.
Masonite Corp., 111 W. Washington St., Chicago 2, Ill.
Master Appliance Mfg. Co., 4th & Ontario St., Racine, Wis.
Master-Craft Supply Co., Inc., 79 W. Broad St., Haverstraw, N. Y.
Master Electric Co., 126 Davis Av., Dayton 1, Ohio.
Master Products Co., Inc., 7000 S. Wentworth Av., Chicago 21, Ill.
Matt Coil-Less Burner Co., 4015 W. Lake St., Chicago 24, Ill.
Matthiessen & Hegeler Zinc Co., LaSalle, Ill.
Mauer Engineering 2525 Colfax St., Evanston, Ill.
Maurey Mfg. Corp., 2915 S. Wabash Av., Chicago 16, Ill.
Maxant Button & Supply Co., 117 S. Morgan St., Chicago 7, Ill.
Maxitrol Co., 12200 Beech Rd., Detroit 28, Mich.
Maxwell, Inc., 2000 S. Cherokee St., Denver, Colo.
Mayflower Air Conditioners, Inc., Duluth Av. & E. Seventh St., St. Paul 6, Minn.
Mayne Products Co., 324 Harries Bldg., Dayton 2, Ohio.
Mayson Mfg. Co., 4332 Horatio St., Detroit 10, Mich.

Maysteel Products, Inc., 740 N. Plankinton Ave., Milwaukee 3, Wis.
Maze Co., W. H., Peru, Ill.
McCabe Powers Auto Body Co., 3900 N. Broadway, St. Louis, Mo.
McCollum Hoist & Mfg. Co., 721 Rogers St., Downers Grove, Ill.
McCord Corp., 2587 E. Grand Blvd., Detroit 11, Mich.
McCorkle Co., D. H., Sixth & Bancroft Way, Berkeley 2, Calif.
McCoy Products Co., 420 Felt Blvd., Salt Lake City 1, Utah.
McDaniel Mfg. Co., Inc., 1012 Powhattan St., Dallas 2, Texas.
McDonald Mfg. Co., A. Y., 12th & Pine Sts., Dubuque, Ia.
McDonnell & Miller, Inc., 3500 N. Spaulding Av., Chicago 18, Ill.
McGraw Electric Co., Clark Div., 5201 W. 65th St., Chicago 38, Ill.
McIntire Co., Okner Parkway, P. O. Box 5, Livingston, N. J.
McKay Co., 1005 Liberty Ave., Pittsburgh 22, Pa.
McKee Furnace Co., 3861 Freemont Av., N., Minneapolis 12, Minn.
McLarty Systems, 2600 Dickman, Battle Creek, Mich.
McPherson Furnace & Supply Co., Box 7706, Portland 12, Ore.
McQuay, Inc., 1600 Broadway, N. E., Minneapolis 13, Minn.
McQuay-Norris Mfg. Co., Southwest Ave. at Marconi, St. Louis, 10, Mo.
Meadows, Inc., W. R., 2 Kimball St., Elgin, Ill.
Mechanical Products Co., 1723 First Ave., S. Seattle 4, Wash.
Meier Electric & Machine Co., Inc., 3525 E. Washington St., Indianapolis 7, Ind.
Mel-Gauge Co., P. O. Box 126, Station A, New Haven, Conn.
Melsway Corp., Box 248, Brandon, Wis.
Melchior, Armstrong, Dessau Co., Ridgefield, N. J.
Mellish & Murray Co., 1715 Carroll Av., Chicago 12, Ill.
Merchandising and Mfg. Associates, Inc., 53 North Duke St., Lancaster, Pa.
Mercoid Corp., 4201 Belmont Av., Chicago 41, Ill.
Meriam Instrument Co., 10920 Madison Av., Cleveland 2, Ohio.
Metal Carrier Corp., 1750 Alpine Ave., N. W., Grand Rapids 4, Mich.
Metal Fabricators, Inc., P. O. Box 3232, Charlotte 3, N. C.
Metal & Thermit Corp., 100 E. 42nd St., New York 17, N. Y.
Metalloy Products Co., 1351 E. 17th St., Los Angeles, Calif.
Metalmen, Inc., 2100 W. Grand Ave., Chicago 12, Ill.
Metro Metal Mfg. Co., Holt, Mich.
Metromatic Mfg. Co., 21 Henderson St., Everett 49, Mass.
Metropolitan Refining Co., Inc., 50-23 23rd St., Long Island City 1, N. Y.
Metzger Machine & Engineering Co., 6770 N. 43rd St., Milwaukee 9, Wis.
Meyer & Bro. Co., F., 308 S. Commercial St., Peoria, Ill.
Meyer Furnace Co., 1300 S. Washington St., Peoria 1, Ill.
Michigan Steel Tube Products Co., Holbrook & Buffalo Avs., Detroit 12, Mich.
Micro Products Co., 20 N. Wacker Dr., Chicago 6, Ill.
Mid-America Steel Warehouses, 1000 W. 50th St., Chicago 9, Ill.
Midco Register Corp., 1039 Grand Av., St. Paul 5, Minn.
Mid-Continent Metal Products Co., 1960 Clybourn Av., Chicago 14, Ill.
Midland Paint & Varnish Co., 3801 E. 91st St., Cleveland 5, Ohio.
Mid-States Welder Mfg. Co., 6025 S. Ashland Ave., Chicago 36, Ill.
Midwest Automatic Control Co., 510 Third St., Des Moines 9, Iowa.
Midwest Mfg. Co., 2205 Haskell Ave., Lawrence, Kans.
Miles Heating Enterprises, 1972 Ford Dr., Cleveland, O.
Miller & Doing, 89 Adams St., Brooklyn 1, N. Y.
Miller Electric Mfg. Co., Inc., 718 S. Bounds St., Appleton, Wis.
Miller-Harris Instrument Co., 601 E. Ogden Av., Milwaukee 2, Wis.
Miller Products Co., 3046 N. Cedar Rd., Lansing 9, Mich.
Millers Falls Co., 57 Wells St., Greenfield, Mass.
Mills Corp., Elmer E., 2930 N. Ashland Ave., Chicago 13, Ill.
Milton Equipment Co., N. E. Cor. 4th & Race Sts., Philadelphia 6, Pa.
Milwaukee Brush Mfg. Co., 2236 N. 30th St., Milwaukee, Wis.
Milwaukee Electric Tool Corp., 5362 W. State St., Milwaukee 8, Wis.
Milwaukee Gas Specialty Co., P. O. Box 461, Milwaukee 1, Wis.
Mine Safety Appliance Co., Braddock, Thomas and Meade Sts., Pittsburgh, Pa.
Minneapolis-Honeywell Regulator Co., 2726 Fourth Av. S., Minneapolis 8, Minn.
Minnesota Mining & Mfg. Co., 900 Fauquier Av., St. Paul 6, Minn.
Minn-Kota Foundry & Mfg. Co., P. O. Box 822, Fargo, N. Dak.
Miracle Adhesives Corp., 214 E. 53rd St., New York, N. Y.
Misener Mfg. Co., Inc., 202-8 Walton St., Syracuse 2, N. Y.
Mission Appliance Corp., 12611 S. Crenshaw Blvd., Hawthorne, Calif.
Mitchell & Co., Inc., W. K., 29th & Ellsworth, Philadelphia 46, Pa.
Mitchell Mfg. Co., 2525 N. Clybourn Ave., Chicago, Ill.
Modern Controls Corp., 24400 Mound Rd., Centerline, Mich.
Modern Die & Machine Co., 166 Pleasant St., Boston 25, Mass.
Modern Engineering Co., 3411 Pine Blvd., St. Louis 3, Mo.
Modern Materials Co., 46330 W. 7 Mile Rd., Northville, Mich.
Modine Mfg. Co., 1500 DeKoven Ave., Racine, Wis.
Moeller Instrument Co., 132nd St. & 89th Av., Richmond Hill 18, N. Y.
Moeschl-Edwards Corrugating Co., Inc., P. O. Box 1115, Cincinnati, Ohio.
Molloy Machine Corp., 3445 N. Western Ave., Chicago, Ill.
Monarch Alloys, 503 N. Chestnut St., Ravenna, Ohio.
Monarch Mfg. Works, Inc., 2501 E. Ontario St., Philadelphia 34, Pa.
Moncrief Furnace Co., P. O. Box 1673, Atlanta 1, Ga.
Moncrief Furnace & Mfg. Co., Inc., 3903 Main St., Dallas 1, Texas.
Moncrief Lenoir Mfg. Co., 2103 Lyons, Houston, Tex.
Monitor Controller Co., 51-55 Hayward St., Boston 84, Mass.
Monogram Products Co., Inc., 731 N. 55th St., Philadelphia 4, Pa.
Montag Stove & Furnace Works, 2011 N. Columbia Blvd., Portland 17, Ore.
Moore Co., 806 S. Missouri Ave., Marceline, Mo.
Moore Div., Conlon-Moore Corp., 105 E. Benton St., Joliet, Ill.
Mor-Flo Heater Corp., 2174 E. 76th St., Cleveland 3, O.
Moreheat Distribution Co., 5608 Stewart, Cincinnati, O.
Morey, Dan, 814-816 S. Robertson Blvd., Los Angeles 35, Calif.
Morris Paint & Varnish Co., 27th & Douglas Sts., Omaha, Nebr.
Morrison Products, Inc., 16816 Waterloo Rd., Cleveland 10, Ohio.
Morrison Steel Products, Inc., 601 Amherst St., Buffalo 7, N. Y.
Morse-Smith-Morse Co., The, 165 Dexter Ave., Watertown 72, Mass.
Mortell Co., J. W., Hobbie Av. & Big Four R.R., Kankakee, Ill.
Morton Engineering Services, Paul S., 609 Bangor Rd., Lawrence, Mich.
Moser & Son Mfg. Co., 227 E. Washington St., Bluffton, Ind.
Mountain States Equipment Co., 1238 Speer Blvd., Denver 4, Colo.
Mt. Hawley Mfg. Co., Mt. Hawley Airport, Peoria 4, Ill.
Mt. Vernon Furnace & Mfg. Co., P. O. Box 213, Mt. Vernon, Ill.
Muckle Mfg. Co., Owatonna, Minn.
Mueller Brass Co., 1925 Lapeer Av., Port Huron, Mich.
Mueller Co., 512 W. Cerro Gordo St., Decatur, Ill.
Mueller Furnace Co., L. J., 2005 W. Oklahoma Av., Milwaukee 15, Wis.
Mulkey Co., J. P., W. 8 Mile & Telegraph Rds., Detroit 19, Mich.
Multi-Therm Mfg. Co., Inc., 11637 Linwood, Detroit 6, Mich.
Muncie Burner Mfg. Co., 27293 Eureka Rd., Romulus, Mich.
Muncie Gear Works, Inc., 700 N. Wysor, Muncie, Ind.
Mundet Cork Corp., 7101 Tonnelle Ave., North Bergen, N. J.
Mundt & Sons, Charles, 33 Fairmont Av., Jersey City 4, N. J.
Munton Mfg. Co., 9400 Belmont Av., Franklin Park, Ill.
Murray Co. of Texas, Inc., 3200 Canton St., Dallas 1, Texas.
Mustee Heater Co., 3409 Superior Av., Cleveland 14, Ohio.
Mutual Liquid Gas & Equipment Co., 3600 W. Imperial Highway, Inglewood, Calif.
Myers & Bro. Co., F. E., Ashland, Ohio.
Myers Electric Co., Inc., 209 First Av., Pittsburgh 22, Pa.

N

Nat Corp., 2710 McGee Trafficway, Kansas City 8, Mo.
National Air Conditioning Inc., 221 Central Ave., Johnstown, Pa.
National Airoil Burner Co., Inc., 1284 E. Sedgley Av., Philadelphia 34, Pa.
National Appliance Co., 4814 W. Vernor Hwy., Detroit 9, Mich.
National Appliances, Inc., Thomas Blvd. & N. Lexington Ave., Pittsburgh 8, Pa.
National Cork Co., 1 Engle St., Englewood, N. J.
National Cylinder Gas Co., 840 N. Michigan Av., Chicago 11, Ill.
National Electric Welding Machines Co., 1846 N. Trumbull St., Bay City, Mich.
National Engineering & Mfg. Co., 16th & Lamiece St., Sedalia, Mo.
National Engineering Products, Inc., Commerce & Savings Bldg., Washington, D. C.
National Foundry & Furnace Co., Station "B," Dayton 7, Ohio.
National Fuel Conservation Co., Inc., 257 Battle Av., White Plains, N. Y.

National Gas Equipment Co., Inc., P. O. Box 443, Terrell, Texas.
National Gypsum Co., 325 Delaware Av., Buffalo 2, N. Y.
National Heater Co., 2180 Cleora Av., St. Paul 4, Minn.
National Lead Co., 111 Broadway, New York 6, N. Y.
National Lock Co., 1902 Seventh St., Rockford, Ill.
National Mfg. Corp., 151 Fillmore Av., Tonawanda, N. Y.
National Metal Fabricators, 2136 S. Sawyer Av., Chicago 23, Ill.
National Modulation Co., 2720 N. Hy. 61, St. Paul 9, Minn.
National Pipe Bending Co., 122 River St., New Haven 13, Conn.
National Screw & Mfg. Co., Chester Hoist Div., Lisbon, Ohio.
National Sheet Metal Co., 1617 Water St., Peru, Ill.
National Steam Pump Co., 701 W. Johnson St., Upper Sandusky, Ohio.
National Super Service Co., Inc., 1944 N. 13th St., Toledo 2, Ohio.
National Tube Div., U. S. Steel Corp., 525 William Penn Pl., Pittsburgh 30, Pa.
Nebel Mfg. Co., P. O. Box 3942, Shaker Sq. Station, Cleveland 20, Ohio.
Neilson Chemical Co., 6564 Benson St., Detroit 7, Mich.
Nelpin Mfg. Co., 45-17 Davis St., Long Island City 1, N. Y.
Nelson Bros. & Strom Co., 1620 Racine St., Racine, Wis.
Nelson Industries, 115 E. Carson St., Pittsburgh, Pa.
Nelson Products, Herman, American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky.
Nelson Specialty Welding Equipment Corp., Dept. 5, 440 Peralta Av., San Leandro, Calif.
Nelson Stud Welding Div., Gregory Industries, Inc., Toledo Av. & E. 28th St., Lorain, Ohio.
Nesbitt, Inc., John J., State Rd. & Rhawn St., Philadelphia 36, Pa.
New Albany Machine Mfg. Co., E. 10th & Water Sts., New Albany, Ind.
New Delphos Mfg. Co., 102 S. Pierce St., Delphos, Ohio.
New England Carbide Tool Co., 60 Brookline St., Cambridge 39, Mass.
New England Cooling Tower Co., 88 Broad St., Boston 10, Mass.
New Jersey Zinc Co., 160 Front St., New York 38, N. Y.
New Monarch Machine & Stamping Co., 406 S. W. 9th St., Des Moines 9, Iowa.
New Plastic Corp., 1026 N. Sycamore, Hollywood 38, Calif.
Newport Steel Corp., Newport, Ky.
New York Belting & Packing Co., 1 Market St., Passaic, N. J.
New York Blower Co., 3155 Shields Av., Chicago 16, Ill.
Newark Ladder & Bracket Co., Inc., Walnut & Central Ave., Clark (Rahway), N. J.
Newcomb-Detroit Co., 5741 Russell St., Detroit 11, Mich.
Newell & Sons, Irwin, Pa.
Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y.
Niagara Machine & Tool Works, 637-697 Northland Av., Buffalo 11, N. Y.
Niagara Motors Corp., Dunkirk, N. Y.
Nicework Metal Products Co., Leetsdale, Pa.
Nichols Wire & Aluminum Co., Davenport, Iowa.
Niles Rolling Mill Co., Niles, Ohio.
Noble & Stanton, Inc., 1035 Broadway, Bedford, Ohio.
Nobur Mfg. Co., 717 N. Victory Blvd., Burbank, Calif.
Nooter Corp., 1400 S. Second St., St. Louis 4, Mo.
Nord International Corp., P. O. Box 41-N62, Denville, N. J.
Norge Heat Div., Borg-Warner Corp., 346 E. South St., Kalamazoo, Mich.
Norma-Hoffmann Bearings Corp., Stamford, Conn.
Norman Products Co., Inc., 1150 Chesapeake Av., Columbus 12, Ohio.
Norristown Magnesia & Asbestos Co., Washington St. below Ford St., Norristown, Pa.
North American Mogul Products Co., Standard Building, Cleveland 13, Ohio.
Northern Blower Co., 6409 Barberton Av., Cleveland 2, Ohio.
Northern Indiana Brass Co., 935 Plum St., Elkhart, Ind.
Northern Steel & Stoker Corp., 3100 Prospect Rd., Peoria 4, Ill.
Northwest Foundry & Furnace Co., 2345 S. E. Gladstone St., Portland 2, Ore.
Northwest Lead Co., 2700 16th Av., S. W., Seattle 4, Wash.
Northwest Metal Products, Inc., 55 Spokane St., Seattle 4, Wash.
Northwestern Stove Repair Co., 662 W. Roosevelt Rd., Chicago 7, Ill.
Nortmann-Duffke Co., 2740 S. 32nd St., Milwaukee 46, Wis.
Norwalk Air Conditioning Corp., 138 Water St., South Norwalk, Conn.
Nugent Furnaces, Thos., 223 E. 80th St., New York 21, N. Y.
NuSteel Co., 1714 S. Ashland Av., Chicago 8, Ill.
NuTone, Inc., Madison & Red Bank Rd., Cincinnati, Ohio.
Nu-Way Corp., The, 2416 Fourth St., Rock Island, Ill.

O

Oakite Products Inc., 19 Rector St., New York 6, N. Y.
Oakland Foundry Co., Florida and A Sts., Belleville, Ill.
Obdyke, Inc., Benjamin P., 447 N. Eighth St., Philadelphia 23, Pa.
O'Brien Corp., 101 N. Johnson St., South Bend 21, Ind.
Octagon Ventilator Co., 5828-30 S. Oakley Av., Chicago 36, Ill.
Ohio Electric Mfg. Co., 5910 Maurice Ave., Cleveland 4, Ohio.
Ohio Foundry & Mfg. Co., Penn R. R. & Slack St., Steubenville, Ohio.
Ohio Paper Co., Miamisburg, Ohio.
Ohio Stove Co., Dept. 351, Portsmouth, Ohio.
Ohio Valley Hardware & Roofing Co., Metal Mfg. Div., 300 Fourth Ave., Evansville 2, Ind.
Ohio Wire Products Co., 217 N. Tuscarawas Av., Dover, Ohio.
Ohmer Co., Geo. H., Box 34, Sta. D, Dayton 10, Ohio.
Ohmlac Paint & Refining Co., 6550 S. Central Av., Chicago 38, Ill.
Oil Equipment Laboratories, Inc., 456 Bridge St., Elizabeth, N. J.
Oil Equipment Mfg. Corp., 169 Derby Ave., New Haven, Conn.
Oilgas Generating Burners, Inc., 410 S. Jefferson St., New Castle, Pa.
O'Keefe & Merritt Co., 3700 E. Olympic Blvd., Los Angeles 23, Calif.
Okun Co., A. L., 109-02 Van Wyck Expwy., So. Ozone Park, N. Y.
Olsen Mfg. Co., The C. A., Filbert St., Elyria, Ohio.
Olson & Co., Arthur A., Broad and Court Sts., Canfield, Ohio.
O'Neil-Irwin Mfg. Co., 394 Eighth Ave., Lake City, Minn.
Oran Co., 2232 S. Third St., Columbus 7, Ohio.
Original Metal Forming Machine Co., P. O. Box 214, Seattle 11, Wash.
Ormsby-Osterman Co., 3631 Cass Av., St. Louis 13, Mo.
Osborn Mfg. Co., 5401 Hamilton Av., Cleveland 14, Ohio.
OverHead Heaters, Inc., 1612 Book Bldg., Detroit 26, Mich.
Overly, Lloyd H., 504 Court St., Maryville, Tenn.
Overly Mfg. Co., Greensburg, Pa.
Owens Co., H., 9300 Venice Blvd., Culver City, Calif.
Owens-Corning Fiberglas Corp., 1930 Nicholas Bldg., Toledo 1, Ohio.

P

Pabco Products Inc., 475 Brannan St., San Francisco 19, Calif.
Pacific Coast Heater Corp., 330 S. Del Mar Av., San Gabriel, Calif.
Pacific Gas Heating Co., 2948 Twentieth St., San Francisco 10, Calif.
Pacific Industrial Mfg. Co., 848 49th Ave., Oakland 1, Calif.
Pacific Lumber Co., 100 Bush St., San Francisco 4, Calif.
Pacific States Felt & Mfg. Co., Inc., 845 Howard St., San Francisco, Calif.
Pacific Transducer Co., Div., Clarkstan Corp., 11921 W. Pico Blvd., Los Angeles 64, Calif.
Packard Electric Div., General Motors Corp., Warren, Ohio.
Packham Crimper Co., Machine Shop, Mechanicsburgh, O.
Packless Metal Hose, Inc., 31-42 Winthrop Ave., New Rochelle, N. Y.
Page Steel & Wire, Div. American Chain & Cable Co., Inc., Monessen, Pa.
Paine Co., Fullerton & Westgate Rd., Addison, Ill.
Palmer Mfg. Corp., 2200 W. Fillmore, Phoenix, Ariz.
Palmer Thermometers, Inc., 2501 Norwood Av., Norwood, Cincinnati 12, Ohio.
Palo-Myers, Inc., 81-83 Reade St., New York 7, N. Y.
Panelyte Div., St. Regis Paper Co., 230 Park Ave., New York 17, N. Y.
Pangborn Corp., 560 Pangborn Blvd., Hagerstown, Md.
Paragon Elec. Co., 1600 - 12th St., Two Rivers, Wis.
Paragon Oil Burner Corp., 75 Bridgewater St., Brooklyn 22, N. Y.
Paramount Supply Co., 2727 N. 48th St., Lincoln 4, Nebr.
Park City Cornice Works, Inc., 729 Union Av., Bridgeport 7, Conn.
Parker Appliance Co., 17325 Euclid Av., Cleveland 12, Ohio.
Parker-Kalon Div., General American Transportation Corp., New York 14, N. Y.
Parker Rust-Proof Co., 2177 E. Milwaukee Av., Detroit 11, Mich.
Patco Mfg. Co., 231 N. Bread St., Philadelphia, Pa.
Patrol Valve Co., 2310 Superior Ave., N. E., Cleveland 14, Ohio.
Patten Co., J. V., 550 DeKalb Av., Sycamore, Ill.
Patterson-Sargent Co., St. Clair & 38th St., Cleveland 14, Ohio.
Paul Valve Corp., 683 Third Ave., New York 17, N. Y.
Paul-Lewis Laboratories, Inc., 4253 N. Port Washington Rd., Milwaukee 12, Wis.
Payne Beverly Mfg. Co., 9242 Beverly Blvd., Beverly Hills, Calif.

Payne Furnace Div., Affiliated Gas Equipment, Inc., 801 Royal Oak Ave., Monrovia, Calif.
Peacard Co., M. A., 2038 Washington St., Roxbury Sta., Boston 19, Mass.
Peck, Stow & Wilcox Co., Center St., Southington, Conn.
Pecora Paint Co., 4th St. & Erie Av., Philadelphia 40, Pa.
Pedrick Tool & Machine Co., 3640 N. Lawrence St., Philadelphia 40, Pa.
Peer, Inc., 1440 Milton St., Benton Harbor, Mich.
Peerless Electric Co., 1401 W. Market St., Warren, Ohio.
Peerless Furnace and Foundry Co., 1853 Ludlow Av., Indianapolis 7, Ind.
Peerless of America, Inc., 1501 N. Magnolia, Chicago 22, Ill.
Peninsular Stove Co., 2699 Gratiot Av., Detroit 7, Mich.
Penn Boiler & Burner Mfg. Corp., Fruitville Rd., Lancaster, Pa.
Penn Brass & Copper Co., Erie, Pa.
Penn Controls, Inc., Goshen, Ind.
Penn Metal Co., Inc., 205 E. 42nd St., New York 17, N. Y.
Penn Supply & Metal Corp., 1831 N. Fifth St., Philadelphia 22, Pa.
Penn Tool Co., 124 E. Cumberland St., Philadelphia 25, Pa.
Penn Ventilator Co., Goodman Av., Philadelphia 40, Pa.
Pennsylvania Engineering Corp., 526 S. Jefferson St., New Castle, Pa.
Pennsylvania Flexible Metallic Tubing Co., 72nd St. & Powers Lane, Philadelphia 42, Pa.
Pennsylvania Furnace & Iron Co., 313 Pine St., Warren, Pa.
Pennsylvania Range Boiler Co., 24th & Ellsworth Sts., Philadelphia 46, Pa.
Pennsylvania Refining Co., Ohio Div., 2686 Lisbon Rd., Cleveland 4, Ohio.
Pennsylvania Salt Mfg. Co., 1000 Widener Bldg., Philadelphia 7, Pa.
Pennsylvania Wire Glass Co., 1612 Market St., Philadelphia 3, Pa.
Perfection Furnace Pipe Co., Toledo 4, Ohio.
Perfection Refrigeration Parts Co., Harvey, Ill.
Perfection Stove Co., 7609 Platt Av., Cleveland 4, Ohio.
Perfex Corp., 500 W. Oklahoma Av., Milwaukee 7, Wis.
Perkinson, William J., 412-14 N. Wolcott Av., Chicago 22, Ill.
Permutit Co., 330 W. 42nd St., New York 18, N. Y.
Pernot Corp., P. O. Box 368, Norwalk, Calif.
Perrygraf Corp., Maywood, Ill.
Peters-Dalton, Inc., 17900 Ryan Road, Detroit 12, Mich.
Petersen Mfg. Co., DeWitt, Nebr.
Peterson Co., B. A., 300 W. Railroad, Dowagiac, Mich.
Petro Div., Iron Fireman Mfg. Co., 3170 W. 106 St., Cleveland 11, Ohio.
Petroleum Solvent Corp., 331 Madison Av., New York 17, N. Y.
Pfanstiehl Chemical Co., 104 Lakeview Av., Waukegan, Ill.
Pfening Co., Fred D., 1075 W. 5th Av., Columbus 12, Ohio.
Phelps Dodge Copper Products Corp., British American Tube Div., 40 Wall St., New York 5, N. Y.
Phelps Mfg. Co., 801 Thomas St., Little Rock, Ark.
Pheoll Mfg. Co., 5700 Roosevelt Rd., Chicago 50, Ill.
Philadelphia Chain Block & Mfg. Co., Inc., Hancock & Norris Sts., Philadelphia, Pa.
Philadelphia Gear Works, Inc., Erie Av. and G St., Philadelphia 34, Pa.
Philadelphia Thermometer Co., 6th & Cayuga Sts., Philadelphia 40, Pa.
Philadelphia Tramrail Co., 3458 N. Weikel St., Philadelphia 34, Pa.
Phillips Cooling Tower Co., Inc., 220 Dupont St., Brooklyn 22, N. Y.
Phillips Drill Co., U. S. 12 and Liberty Trail, Michigan City, Ind.
Phillips & Buttorff Mfg. Co., 217 Third Av., N., Nashville, Tenn.
Photoswitch, Inc., 77 Broadway, Cambridge 42, Mass.
Piatt Products Corp., 1149 S. Pennsylvania Ave., Lansing 4, Mich.
Pioneer Furnace Co., 3131 San Fernando Rd., Los Angeles 65, Calif.
Pioneer Tool Co., 1103 Wisconsin Av., Racine, Wis.
Pioneer Water Heater Corp., 3131 San Fernando Rd., Los Angeles 65, Calif.
Pittsburgh Corning Corp., 307 Fourth Ave., Pittsburgh 22, Pa.
Pittsburgh Furnace Parts Co., 109 Federal St., Pittsburgh, Pa.
Pittsburgh Lectrodryer Corp., P. O. Box 1766, Pittsburgh 30, Pa.
Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.
Pittsburgh Steel Co., 800 Grant Bldg., Pittsburgh, Pa.
Pittsburgh Water Heater Co., P. O. Box 4452, Pittsburgh 5, Pa.
Plasteel Products Corp., McAdam Ave., Washington, Pa.
Plastergon Wall Board Co., Philadelphia Av., Buffalo 7, N. Y.
Plastic Products Co., 6459 Georgia Av., Detroit 11, Mich.
Plummer Spray Equipment Co., 700 Filmore St., Napoleon, Ohio.
Plymouth Industries, Inc., 1932 Harrison Av., Plymouth, Ind.
Polaire Cooler Co., Inc., P. O. Box 117, El Mirage, Ariz.
Polis Mfg. Co., J. D., 2900-20 W. 26th St., Chicago 23, Ill.
Pollenex, 303 W. Monroe, Chicago, Ill.
Polo Pump Co., Polo, Ill.
Portable Electric Tools, Inc., 320 W. 83rd St., Chicago 20, Ill.
Porter-Cable Machine Co., 1714 N. Salina St., Syracuse 8, N. Y.
Portland Stove Foundry Co., 57 Kennebec St., Portland 2, Maine.
Potomac Mfg. Co., 318 S. 10th St., Philadelphia 7, Pa.
Potts-Farrington Co., 4250 Wissahickon Ave., Philadelphia 29, Pa.
Powder Power Tool Corp., 7526 S. W. Macadam Ave., Portland 1, Ore.
Power-Freze, Inc., 45 Third St., N. E., Atlanta, Ga.
Powers Regulator Co., 3400 Oakton St., Skokie, Ill.
Powers Wire Products Co., P. O. Box 216, 523 Detroit Ave., Monroe, Mich.
Prat-Daniel Corp., South Norwalk, Conn.
Precision Thermometer & Instrument Co., 1482 Brandywine St., Philadelphia 30, Pa.
Precision Welder Mfg. Co., 660 W. Grand Ave., Chicago, Ill.
Preferred Utilities Mfg. Corp., 1860 Broadway, New York 23, N. Y.
Premier Furnace Co., Lock Box 150, Dowagiac, Mich.
Premier Metal Etching Co., 21-03 44th Av., Long Island City 1, N. Y.
Premier Stove Co., Belleville, Ill.
Premium Coal & Oil Co., 5830 Carthage Ave., Cincinnati 12, Ohio.
Prepo Corp., Edgerton, Wis.
Presstite Engineering Co., 3900 Chouteau St., St. Louis 10, Mo.
Price Bros., Flexicore Div., E. Monument Ave., Dayton, Ohio
Pritchard & Co., J. F., Equipment Div., 210 W. 10th St., Kansas City 5, Mo.
Producers & Distributors, Inc., 714 S. 6th St., Allentown, Pa.
Products Research Co., 3126 Los Feliz Blvd., Los Angeles 39, Calif.
Progressive Welder Sales Co., 3070 E. Outer Dr., Detroit 34, Mich.
Protective Coatings, Inc., P. O. Box 3985, Strathmoor Station, Detroit 27, Mich.
Proto Tools, 2209 Santa Fe Ave., Los Angeles 58, Calif.
Pryne & Co., Inc., 140 N. Towne Ave., P. O. Box 698, Pomona, Calif.
Puhl & Hepper Mfg. Co., Inc., 6400 W. Florissant Av., St. Louis 20, Mo.
Pullman Vacuum Cleaner Corp., 31-39 Allerton St., Boston 19, Mass.
Purolator Products, Inc., 970 New Brunswick Ave., Rahway, N. J.
Pyle-National Co., Multi-Vent Div., 1334 N. Kostner Av., Chicago 51, Ill.
Pyott Foundry & Machine Co., 328 N. Sangamon St., Chicago 7, Ill.
Pyramid Mouldings, Inc., 5353 W. Armstrong Av., Chicago 30, Ill.
Pyrolite Products Co., 1221-31 W. 74th St., Cleveland 2, Ohio.

Q

Quad Stove Co., 78 East First St., Columbus, Ohio.
Quaker State Metals Co., Box 1138, Lancaster, Pa.
Quality Heating Supply Co., 1632 Race St., Cincinnati, O.
Queen Stove Works, Inc., 505 Front St., Albert Lea, Minn.
Quick Furnace & Supply Co., 215 Court Av., Des Moines 9, Iowa.
Quickdraft Co., Div. Hall's Safe Co., Inc., 1642 Cleveland Ave., N. W., Canton, Ohio.
Quiet-Air Mfg. Div., Abco Refrigeration Supply Co., 1615 Second Ave., New York 28, N. Y.
Quiet Automatic Burner Corp., 33-35 Bloomfield Ave., Newark 4, N. J.
Quiet-Heet Mfg. Corp., 46 Oliver St., Newark 5, N. J.
Quigley Co., Inc., 527 Fifth Av., New York 17, N. Y.
Quincy Stove Mfg. Co., 807 S. Front St., Quincy, Ill.

R

R. B. Enterprises, Inc., 2284 Maxwell, Detroit 14, Mich.
RCS Tool Sales Corp., P. O. Box 1434, Joliet, Ill.
R-S Products Corp., 4600 Germantown Ave., Philadelphia 44, Pa.
Racine Hydraulics & Machinery, Inc., 2000 Albert St., Racine, Wis.
Radair Mfg. Co., 251 Howard St., Melrose, Mass.
Radiant-Aire Corp., Arthur St., Box 151, Michigan City, Ind.
Radiant Burners, Inc., 310 S. Main St., Lombard, Ill.
Radiant Utilities Corp., 8817 18th Ave., Brooklyn, N. Y.
Radiation Furnace Corp., Benton Harbor, Mich.

Radiator Specialty Co., 1700-1900 Dowd Rd., Charlotte 1, N. C.
Radio Corp. of America, Front & Cooper Sts., Camden, N. J.
Ralph Mfg. Co., Inc., P. O. Box 188, Wadsworth, Ohio.
Ramset Fasteners, Inc., 12117 Berea Rd., Cleveland, Ohio.
Ramtite Co., Div. S. Obermayer Co., 2563 W. 18th St., Chicago 8, Ill.
Ranco, Inc., 601 W. 5th Ave., Columbus 1, Ohio.
Randall Graphite Bearings, Inc., Greenlawn & Lake Sts., Lima, Ohio.
Ransome Co., 4030 Hollis St., Emeryville 8, Calif.
Rapidesign, Inc., P. O. Box 592, Glendale, Calif.
Rasch Mfg. Corp., 1630-48 Oakland Ave., Kansas City 3, Mo.
Rawlplug Co., Inc., The, 271 Church St., New York 13, N. Y.
Raybestos-Manhattan, Inc., 61 Willett St., Passaic, N. J.
Rayfield Co., C. L., 2010 S. Halsted St., Chicago 8, Ill.
Ray Oil Burner Co., 1301 San Jose Av., San Francisco 12, Calif.
Reading Crane & Hoist Corp., 2100 Adams St., Reading, Pa.
Reco Products Div., Recony Corp., 150 Nassau St., New York, 38, N. Y.
Redmond Distributors, Inc., 420 Lexington Ave., New York 17, N. Y.
Red Spot Electric Co., 7405 S. Tacoma Way, Tacoma 9, Wash.
Red Wing Oil Burner Co., Inc., 217 Mystic Ave., Medford 55, Mass.
Reed Engineering Co., 1003 W. Fairview, P. O. Box 415, Carthage, Mo.
Reed Unit-Fans, Inc., 1001 St. Charles Av., New Orleans 8, La.
Rees Blow Pipe Mfg. Co., 340 Seventh St., San Francisco 3, Calif.
Reeves Steel & Mfg. Co., Lock Box 107, Dover, Ohio.
Reflectal Corp., 155 E. 44th St., New York 17, N. Y.
Refractory & Insulation Corp., 120 Wall St., New York 5, N. Y.
Refrigeration Economics Co., Inc., 1231 Tuscarawas St., E., Canton 2, Ohio.
Refrigeration Engineering, Inc., 7250 E. Slauson Ave., Los Angeles 22, Calif.
Rega Mfg. Co., 79 Mt. Hope Av., Rochester 20, N. Y.
Register & Grille Mfg. Co., Inc., 70 Berry St., Brooklyn 11, N. Y.
Rehm, R., 112 208th St., St. Albans 11, N. Y.
Reichert Float & Mfg. Co., 2238 Smead Av., Toledo 6, Ohio.
Reichhelm Co., Robert, Sniffen Lane, Stratford, Conn.
Reif-Rexoil, Inc., 37-41 Carroll St., Buffalo 3, N. Y.
Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., Indianapolis 4, Ind.
Reiner & Campbell Co., Inc., 19 Euclid Ave. at Lockwood St., Box 5035, Newark 5, N. J.
Reliable Gas Products Co., 221 Third St., N. E., Cedar Rapids, Iowa.
Reliance Automatic Lighting Co., 1929 Mead St., Racine, Wis.
Reliance Electric & Engineering Co., 1058 Ivanhoe Rd., N. E., Cleveland 10, Ohio.
Reliance Refrigerating Machine Co., 3401 N. Kedzie Ave., Chicago, Ill
Reliance Regulator Div., American Meter Co., Inc., 1000 Meridian Ave., Alhambra, Calif.
Remco, Inc., Zelienople, Pa.
Remington Air Conditioning Div., Remington Corp., Auburn, N. Y.
Remington Arms Co., Inc., Barnum Ave., Bridgeport, Conn.
Rempe Co., 340 N. Sacramento Ave., Chicago 12, Ill.
Republic Heater Corp., 2231 Randolph St., Huntington Park, Calif.
Republic Products Co., 7420 State Rd., Philadelphia, Pa.
Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown 1, Ohio.
Republic Steel Corp., Republic Bldg., Cleveland 1, Ohio.
Research Products Corp., 1015 E. Washington Av., Madison 10, Wis.
Reuland Electric Co., Alhambra, Calif.
Revcor, Carpentersville, Ill.
Revere Copper and Brass, Inc., 230 Park Av., New York 17, N. Y.
Revere Products, Inc., 9145 E. Forest Av., Detroit 13, Mich.
Rex Roto Corp., 14414 Dexter Blvd., Detroit 6, Mich.
Rex Welder and Engineering Co., 409 Southwest Blvd., Kansas City 8, Mo.
Reynolds Electric Co., 3009 River Rd., River Grove, Ill.
Reynolds Gas Regulator Co., 1416 Lincoln St., Anderson, Ind.
Reynolds Mfg. Co., Springfield 2, Mo.
Reynolds Metals Co., P. O. Box 2158, Louisville 1, Ky.
Reznor Mfg. Co., Mercer, Pa.
Rheem Mfg. Co., 570 Lexington Ave., New York 22, N. Y.
Rhoades Industries, Inc., Rand Hotel Bldg., Fargo, N. Dak.
Rhodes & Co., J. C., Branch of United Shoe Machinery Corp., New Bedford, Mass.
Rhodes, Inc., M. H., 30 Bartholomew Av., Hartford 6, Conn.
Richards-Wilcox Mfg. Co., 275 Third St., Aurora, Ill.
Richfield Mfg. Corp., 33 Lawton St., New Rochelle, N. Y.
Richmond Radiator Co., Affil. Reynolds Metals Co., Box 111, Metuchen, N. J.
Riester & Thesmacher Co., 1526 W. 25th St., Cleveland 13, Ohio.
Riggin Metal Products, Box 267, Kankakee, Ill.
Rigidbilt, Inc., 2850 W. Fulton St., Chicago 12, Ill.
Rigidized Metals Corp., 699-P Ohio St., Buffalo 3, N. Y.
Rinehart Inc., Richmond, Ind.
Rival Strap Corp., 308 W. 20th St., New York 11, N. Y.
Riverton Lime & Stone Co., Inc., Riverton, Va.
Robbins & Myers, Inc., 1345 Lagonda Av., Springfield 99, Ohio.
Robert Mfg. Co., 9035 Venice Blvd., Los Angeles 34, Calif.
Roberts Co., S. R., Marshall, Mich.
Roberts-Gordon Appliance Co., 44 Central Ave., Buffalo 6, N. Y.
Robertshaw Thermostat Div., Robertshaw-Fulton Controls Co., Youngwood, Pa.
Robertson, F. L., 56 Rano St., Buffalo, N. Y.
Robertson Co., H. H., 2400 Farmers Bank Bldg., Pittsburgh 22, Pa.
Robinson Aviation, Inc., Teterboro, N. J.
Robinson Insulation Co., P. O. Box 1419, Great Falls, Mont.
Robinson Ventilating Co., Zelienople, Pa.
Robot Auto-Heat Corp., Newfield St., Middletown, Conn.
Rochester Mfg. Co., Inc., 66 Rockwood St., Rochester 10, N. Y.
Rockford Screw Products Co., 2501 Ninth St., Rockford, Ill.
Rock Island Register Co., 2435 Fifth Av., Rock Island, Ill.
Roebling's Sons Corp., John A., Suby. Colorado Fuel and Iron Corp., 640 S. Broad St., Trenton 2, N. J.
Roesch Tool Co., 3461 Grand View Blvd., Los Angeles 34, Calif.
Roessing Mfg. Co., 1616 Noble St., Sharpsburg, Pittsburgh 15, Pa.
Rohm & Haas Co., 222 W. Washington St., Philadelphia, Pa.
Roliton of America, Inc., 714 E. Van Buren St., Phoenix, Ariz.
Rome-Turney Radiator Co., Canal St., Rome, N. Y.
Ronci Machine Co., Inc., F., 2 Atlantic Blvd., Centredale 11, R. I.
Roofing & Supply Co., 1409-15 Fort St., Chattanooga, Tenn.
Roper Corp., Geo. D., Blackhawk Park Av., Rockford, Ill.
Rosebraugh Co., W. W., 680 S. 17th St., Salem, Ore.
Rosedale Foundry & Machine Co., Columbus & Preble Ave., N. S. Pittsburgh 12, Pa.
Rose Mfg. Co., 1731 Arapahoe St., Denver 2, Colo.
Ross Sprinkler Co., 34 Roberts St., Pasadena 3, Calif.
Rossaul Co., 170 Fifth Ave., New York 10, N. Y.
Rossoe Mfg. Co., 413 Fairview Ave., N., Seattle, Wash.
Rotary Concrete Drill Co., 650 S. Arroyo Parkway, Pasadena 2, Calif.
Rotex Punch Co., Inc., 2350 Alvarado, San Leandro, Calif.
Roto-Table Co., 2605 E. Third St., Dayton 3, Ohio.
Rotor Corp., P. O. Box 42, Far Hills Br., Dayton 9, Ohio
Rotor Tool Co., 26300 Lakeland Blvd., Cleveland 23, Ohio.
Round Bridgeport Chain & Mfg. Co., 964 Crescent Ave., Bridgeport 1, Conn.
Round Oak Co., Inc., Dowagiac, Mich.
Royal-Apex Mfg. Co., Inc., 1389-97 Atlantic Ave., Brooklyn 16, N. Y.
Royal Jet, Inc., 1024 Westminster Av., Alhambra, Calif.
Royal Ventilator Co., 415 Locust St., Philadelphia 6, Pa.
Royersford Foundry & Machine Co., 55 Main St., Royersford, Pa.
Ruberoid Co., 500 Fifth Av., New York 36, N. Y.
Ruby Chemical Co., 74 McDowell St., Columbus 8, Ohio.
Ruby Management Co., 620 Brookline Blvd., Pittsburgh 26, Pa
Ruemelin Mfg. Co., 3860 N. Palmer St., Milwaukee 12, Wis.
Ruggles-Klingemann Mfg. Co., 4 Foster Ct., Salem, Mass.
Russell Co., F. C., 1100 Chester Ave., Cleveland 1, Ohio.
Russell Mfg. Co., Inc., John M., Box 246, Naugatuck, Conn.
Rust-Oleum Corp., 2425 Oakton St., Evanston, Ill.
Rutland Fire Clay Co., 91 Curtis Av., Rutland, Vt.
Ruud Mfg. Co., 2934 Smallman St., Pittsburgh 1, Pa.
Rybolt Heater Co., 615 Miller St., Ashland, Ohio.
Ryerson & Son, Inc., Joseph T., 2558 W. 16th St., Chicago 80, Ill.
Ryniker Steel Products Co., 11-19 N. 25th St., Billings, Mont.

S

S-K Co., Inc., Admiral Wilson Blvd., Camden, N. J.
SKF Industries, Inc., Front St. and Erie Av., Philadelphia 32, Pa.
S.O.S. Products Co., Inc., 282 Nassau Ave., Brooklyn 22, N. Y.
Saginaw Salt Products Co., 3000 Carrollton Rd., Saginaw 35, Mich.
St. Charles Mfg. Co., St. Charles, Ill.
St. Clair Foundry Corp., Beech & Wilson Sts., Centralia, Ill.
St. Clair Metal Products Co., 6700 Central Ave., Cleveland, O.

St. Clair Rubber Co., Marysville, Mich.
St. Louis Furnace Mfg. Co., 2710 N. 25th St., St. Louis 6, Mo.
St. Louis Tool Co., 6100 Prescott St., St. Louis 15, Mo.
St. Paul Corrugating Co., South Wabasha & Water Sts., St. Paul 1, Minn.
Sall Mountain Co., Box 777, Hamilton, Ohio.
Samuel Stamping & Enameling Co., Manufacturers Rd., Chattanooga, Tenn.
San Angelo Foundry & Machine Co., 1200 Park Ave., Mt. Vernon, Ill.
San Carlos Mfg. Co., 850 E. San Carlos Ave., San Carlos, Calif.
Sandberg Mfg. Co., 3850 N. W. Yeon Av., Portland 10, Ore.
Sandee Mfg. Co., 5050 W. Foster Ave., Chicago, Ill.
Sanders, J. A., Box 123, Fulton, N. Y.
Sangamo Electric Co., 1301 N. 11th St., Springfield, Ill.
Santa Fe Tank & Tower Co., 5401 S. Boyle Ave., Los Angeles 11, Calif.
Saran Lined Pipe Co., 2415 Burdette Ave., Ferndale 20, Mich.
Sarco Co., Inc., Empire State Bldg., New York 1, N. Y.
Sarcotherm Controls, Inc., Empire State Bldg., New York 1, N. Y.
Sargent EnginAiring Co., 1375 E. 45th St., Cleveland, O.
Sauereisen Cements Co., 1045 N. Canal St., Pittsburgh 15, Pa.
Savage Co., W. J., 912 W. Clinch Av., Knoxville 16, Tenn.
Scaife Co., Oakmont, Pittsburgh District, Pa.
Schaefer Brush Mfg. Co., 115-117 W. Walker, Milwaukee 4, Wis.
Scheck, William, 353 Shaler Blvd., Ridgefield, N. J.
Schecter Bros. Co., N. W. Cor. Hancock & Huntington Sts., Philadelphia 33, Pa.
Schild Mfg. Co., Lakewood Station, Box 9803, Dallas 2, Texas.
Schill Mfg. Co., 302 Mansfield St., Crestline, Ohio.
Schnacke, Inc., 1101 N. Governor St., Evansville, Ind.
Schoedinger, F. O., 322-358 Mt. Vernon Av., Columbus 16, Ohio.
Schori Process Div. Ferro-Co. Corp., 8 Forty-third Rd., Long Island City 1, N. Y.
Schwab Furnace Co., 332 W. Florida St., Milwaukee 4, Wis.
Schwab Safe Co., East Maine and Boulevard, Lafayette, Ind.
Schwitzer-Cummins Co., 1125 Massachusetts Ave., Indianapolis 7, Ind.
Sciaky Bros., Inc., 4915 W. 67th St., Chicago 38, Ill.
Scientiae Tool Co., 101 Pine St., Dayton, Ohio.
Scott-Newcomb, Inc., 3702-04 Superior Ave., Cleveland 14, O.
Scovill Mfg. Co., Waterville Div., Waterville, Conn.
Scully Signal Co., 174 Green St., Melrose, Mass.
Seamlex Co., Inc., 41-23 24th St., Long Island City 1, N. Y.
Seco-Lite Mfg. Co., 4916 Easton Av., St. Louis 13, Mo.
Selas Corp. of America, Erie Ave. and D St., Philadelphia 34, Pa.
Selectrol Engineering Co., 2036 McDonald Av., Brooklyn 23, N. Y.
Semet-Solvay Engineering Div., Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Sequoia Mfg. Co., 1000 Brittan Av., San Carlos, Calif.
Servel, Inc., 119 Morton Av., Evansville 20, Ind.
Service Machine Co., Inc., 466 Miller St., Elizabeth 4, N. J.
Set Screw & Mfg. Co., 11 Main St., Bartlett, Ill.
Severson Mfg. & Supply Co., 1034 W. Somers St., Milwaukee 5, Wis.
Shafer Bearing Div., Chain Belt Co., 801 Burlington Ave., Downers Grove, Ill.
Shakeproof Div., Illinois Tool Wks., 2501 N. Keeler Av., Chicago 39, Ill.
Shallcross Controls, Inc., 2217-21 N. 31st St., Milwaukee 8, Wis.
Shank Co., Cyrus, 625 W. Jackson Blvd., Chicago 6, Ill.
Sharon Steel Corp., Drawer 537, Sharon, Pa.
Sheet Metal Mfg. Co., 6400 Southern Blvd., Youngstown 12, O.
Sheet Metal Mfg. Co., Inc., 953 Myrtle Av., Brooklyn 6, N. Y.
Sheet Metal Specialty Div., Follansbee Steel Corp., P. O. Box 567, Follansbee, W. Va.
Shell Oil Co., 50 W. 50th St., New York 20, N. Y.
Shepard Niles Crane & Hoist Corp., 410 Schuyler Av., Montour Falls, N. Y.
Sheridan-Gray, Inc., 405 Via Chico, Palos Verdes Estates, Calif.
Sherwin-Williams Co., 101 Prospect Ave., N. W., Cleveland 1, Ohio.
Siemon Mfg. Co., 1819 Holmes St., Kansas City 8, Mo.
Sight Feed Generator Co., P. O. Box 38, West Alexandria, Ohio.
Sightmaster of California Co., Gillespie Airport, Santee, Calif.
Signal Electric Mfg. Co., P. O. Box 75, Menominee, Mich.
Silent Glow Oil Burner Co., 830 Windsor St., Hartford, Conn.
Silent Sioux Corp., Orange City, Iowa.
Silvercote Products, Inc., 161 E. Erie St., Chicago 11, Ill.
Simonds Saw & Steel Co., 470 Main St., Fitchburg, Mass.
Simplex Mfg. Co. 200 N. Main St., Fond du Lac, Wis.
Simplex Oil Heating Corp., 7901 Oxford Av., Philadelphia 11, Pa.
Simpson Co., 1050 E. 8th St., Oakland 6, Calif.
Sioux Steel Co., Sioux Falls, S. Dak.
Sipe & Co., James B., 118 Vanadium Rd., Pittsburgh 16, Pa.
Sisalkraft Co., The, 205 W. Wacker Dr., Chicago 6, Ill.
Skil Corp., 5033 Elston Av., Chicago 30, Ill.
Skilbeck Mfg. Co., 7432 27th Av., Kenosha, Wis.
Skinner Electric Valve Div., The Skinner Chuck Co., 95 Edgewood Ave., New Britain, Conn.
Skinner Heating & Ventilating Co., Div. St. Louis Blow Pipe & Heater Co., Inc., 1954 N. 9th St., St. Louis 6, Mo.
Skuttle Mfg. Co., Milford, Mich.
Slip-On, Inc., 401 Broadway, New York 13, N. Y.
Sly Mfg. Co., W. W., 4736 Train Av., Cleveland 2, Ohio.
Small Lot Stamping Co., 1025 W. Blancke St., Linden, N. J.
Small Motors, Inc., 2076 Elston Av., Chicago 14, Ill.
Smith Co., J. B., 3327 B St., Philadelphia 34, Pa.
Smith Corp., A. O., Milwaukee 1, Wis.
Smith Filter Corp., 2nd Av., Moline, Ill.
Smith Furnace Co., 216 S. Croton Ave., New Castle, Pa.
Smith, R. E., 1806 Belvidere St., Waukegan, Ill.
Smith & Son., Inc., Seymour, Box 591, Oakville, Conn.
Smith Welding Equipment Corp., 2633 Fourth St., S. E., Minneapolis 14, Minn.
Smooth-on Mfg. Co., 568-574 Communipaw Av., Jersey City 4, N. J.
Snap-On Mfg. Co., 1028 Blue Island Av., Chicago, Ill.
Snap-On Tools Corp., Kenosha, Wis.
Solar Aircraft Co., San Diego 12, Calif.
Solvay Process Div., Allied Chemical & Dye Corp., 61 Broadway, New York 6, N. Y.
Somers, Inc., H. J., 6063 Wabash Av., Detroit 8, Mich.
Sommerfeld Louvres, Inc., 207 E. 37th St., New York 16, N. Y.
Sonneborn Sons, Inc., L., 80 Eighth Ave., New York 11, N. Y.
Sonoco Products Co., Construction Products Div., Hartsville, S. C.
Soreng Mfg. Co., 9551 Soreng Ave., Schiller Park, Ill.
Soss Mfg. Co., 21777 Hoover Rd., Detroit 13, Mich.
Soule Steel Co., 1750 Army St., San Francisco 24, Calif.
South Bend Air Products, Inc., 322 E. Colfax, South Bend 22, Ind.
South Wind Div., Stewart-Warner Corp., 1514 Drover St., Indianapolis 7, Ind.
Southbridge Roofing Co., Inc., Hartwell & Chapin Sts., Southbridge, Mass.
Southco Div., South Chester Corp., Finance Bldg., Philadelphia 2, Pa.
Souther Iron Co., E. E., 1952 Kienlen Av., St. Louis 20, Mo.
Southern Air Conditioning Mfg. Co., 1309 Calhoun St., Fort Worth 2, Texas.
Southern Aircraft Co., Garland, Dallas Co., Texas.
Southern States Iron Roofing Co., Stiles Av. & Louisville Rd., Savannah, Ga.
Southport Paint Co., Div. Wesson Oil & Snowdrift Co., Inc., Savannah, Ga.
Southwestern Heater Corp., 309 Browder St., Dallas, Texas.
Southwest Mfg. Co., Box 28, Aurora, Mo.
Southwest Mfg. Co., Box 1615, Santa Ana, Calif.
Spark Stove Co., Inc., 2619 E. 12th St., Oakland 1, Calif.
Sparkler Mfg. Co., Mundelein, Ill.
Spear Stove & Heater Co., James, 1000 Diamond St., Philadelphia 22, Pa.
Speco, Inc., 7308 Associate Ave., Cleveland 9, Ohio.
Speedway Mfg. Co., 1854 S. 52nd Ave., Cicero 50, Ill.
Spencer Thermostat Div., Metals & Controls Corp., 34 Forest St., Attleboro, Mass.
Spencer Turbine Co., 484 New Park Av., Hartford 6, Conn.
Sperry & Co., D. R. Batavia, Ill.
Sperti Faraday, Inc., Cooper Hewitt Div., 1077 Celestial St., Cincinnati 2, O.
Sponge Rubber Products Co., 280 Derby Place, Shelton, Conn.
Sporlan Valve Co., 7525 Sussex Av., St. Louis 17, Mo.
Spotweld Co., 3762 Ridge Rd., Cleveland, Ohio.
Sprague Products Co., North Adams, Mass.
Spray Engineering Co., 114 Central St., Somerville 45, Mass.
Spraying Systems Co., 3201 Randolph St., Bellwood, Ill.
Sprayo-Flake Co., 2715 Irving Park Blvd., Chicago 18, Ill.
Spun Steel Div., Automatic Steel Products, Inc., 1201 Camden Av., S. W., Canton 6, Ohio.
Square D Co., 6060 Rivard St., Detroit 11, Mich.
Square D Co., Industrial Controller Div., 4041 N. Richards St., Milwaukee 12, Wis.
Stahl Metal Products, 3490 E. 140th, Cleveland, O.
Stamco Inc., New Bremen, Ohio.
Standard Arcoil Corp., 21-23 Broad St., Newark 4, N. J.
Standard Asbestos Mfg. Co., 860 W. Evergreen Ave., Chicago 22, Ill.
Standard Electric Mfg. Co., Inc., West Berlin, N. J.
Standard Fuel Engineering Co., 667 Post Av., S., Detroit 17, Mich.

Standard Furnace Supply Co., Ltd., 413 S. Tenth St., Omaha 8, Nebr.
Standard Heating Equipment Co., 1406 E. Fourth St., Waterloo, Iowa.
Standard Power Groove Machine Corp., 99 Hudson St., New York 13, N. Y.
Standard Refrigeration Co., 3535 Fillmore St., Chicago 24, Ill.
Standard Remote Control Valve Co., 205 Pasadena Av., South Pasadena, Calif.
Standard Rolling Mills, Inc., 196 Diamond St., Brooklyn 22, N. Y.
Standard Stamping & Perforating Co., 3137 W. 49th Pl., Chicago, Ill.
Standard Ventilator Co., Lewisburg, Pa.
Stanley Electric Tools Div., The Stanley Works, 480 Myrtle St., New Britain, Conn.
Stanley Tools, New Britain, Conn.
Stanthony Corp., 2305 W. Alameda Ave., Burbank, Calif.
Star Expansion Bolt Co., 147 Cedar St., New York 6, N. Y.
Star Stainless Screw Co., 195 Union Ave., Paterson, N. J.
Stark & Co., H. W., 5668 Geddes Rd., Ann Arbor, Mich.
Star-Kimble Motor Div., Miehle Printing Press & Mfg. Co., 200 Bloomfield Av., Bloomfield, N. J.
Steel City Furnace Co., Springdale, Pa.
Steel Products Engineering Co., Combustioneer Div., 1205 W. Columbia St., Springfield, Ohio.
Steel & Tubes Div., Republic Steel Corp., 216 E. 131st St., Cleveland 8, Ohio.
Steelcraft Mfg. Co., 9017 Blue Ash Rd., Rossmoyne, O.
Steele Mfg. Co., 445 Winchester Ave., Ashland, Ky.
Stefco Steel Co., 41 Roeske Av., Michigan City, Ind.
Steffens-Amberg Co., 262 Morris Av., Newark 3, N. J.
Steinen Mfg. Co., Wm., 43 Bruen St., Newark, N. J.
Stephens-Adamson Mfg. Co., Ridgeway Av., Aurora, Ill.
Sterling Air Conditioning Corp., 2222 South Boulevard, Charlotte, N. C.
Sterling Electric Motors, Inc., 5401 Telegraph Rd., Los Angeles 22, Calif.
Sterling Engineering Co., 7402 Lansdowne Av., St. Louis 19, Mo.
Sterling Foundry Co., P. O. Box 457, Sterling, Ill.
Stewart Co., W. H., 420 E. Grand Av., Oklahoma City 2, Okla.
Stewart Ice Machine Co, 1282 W. 1st St., Pomona, Calif.
Stewart Mfg. Co., Grove Ave., Cedar Grove, N. J.
Stewart Mfg. Co., 320 E. St. Joseph St., Indianapolis 2, Ind
Stewart-Warner Corp., U. S. Machine Div., Lebanon, Ind.
Stic-Klip Mfg. Co., Inc., 50 Regent St., Cambridge 40, Mass.
Stokar-Ola Mfg. Co., 2400 S. Adams St., Peoria, Ill.
Stokol Stoker Co., Inc., 1600 Webster St., Dayton, Ohio.
Stonewall Co., 54th & LaSalle St., Chicago, Ill.
Stortz & Son, Inc., John, 210 Vine St., Philadelphia 6, Pa.
Stossel & Sons Co., Carl, Front Royal, Va.
Stow Mfg. Co., 445 State St., Binghamton, N. Y.
Stratton & Terstegge Co., 1501 W. Main St., Louisville 1, Ky.
Structural Slate Co., The, E. Main St., Pen Argyl, Pa.
Stueck, Inc., W. Whitney, Old Saybrook, Conn.
Sub-Zero Freezer Co., Inc., Route 3, Box 2017, Madison, Wis.
Sudbury Laboratory, South Sudbury, Mass.
Sullivan Valve & Engineering Co., P. O. Box 1931, Butte, Mont.
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp., Elyria, O.
Sunbeau Heater Co., 3510 S. Hill St., Los Angeles 7, Calif.
Sundstrand Engineering Co., 1325 Seventh St., Rockford, Ill.
Sundstrand Machine Tool Co., Hydraulic Div., 2531 Eleventh St., Rockford, Ill.
Sundstrom Pressed Steel, 8030 S. Chicago Ave., Chicago, Ill.
Sun-Fire Stoker Corp., 802 E. Eighth St., New Albany, Ind.
Sunny Sue Burner Co., 117 Bertram Pl., Syracuse, N. Y.
Sun-Ray Burner Mfg. Corp., 139-24 Queens Blvd., Jamaica 2, N. Y.
Sunshine Mantle Co., Chanute, Kans.
Superbo Mfg. Co., 4090 N. Mission Rd., Los Angeles 33, Calif.
Super Radiator Corp., 6714 Walker St., Minneapolis 16, Minn.
Superior Coated Specialties, 4635 S. Harlem Ave., Berwyn, Ill.
Superior Controls Co., Inc., 1835 S. Bonnie Brae, Los Angeles 6, Calif.
Superior Flux & Mfg. Co., 1302 Ontario St., Cleveland 13, Ohio.
Superior Furnace & Mfg. Co., 322 Hamilton, Plymouth, Mich.
Superior Mfg. Co., Inc., 203 N. Pennsylvania Ave., Alexandria, Ind.
Superior Mfg. Co., 3204 Penn Ave., Pittsburgh 1, Pa.
Superior Metal Fabricating Co., Pleasant Ave., Niles, Ohio.
Superior Pneumatic & Mfg., Inc., 4758 Warner Rd., Cleveland 25, Ohio.
Superior Products Co., 606 S. 14th St., Omaha 2, Nebr.
Superior Safety Furnace Pipe Co., 5820 Forsythe Av., Detroit 2, Mich.
Superior Steel Corp., Grant Bldg., Pittsburgh, Pa.
Superior Valve and Fittings Co., 1509 W. Liberty Ave., Pittsburgh 26, Pa.
Supreme Electric Products Corp., 194 Vassar St., Rochester 7, N. Y.
Sure Comfort Furnace Co., 900 S. Des Plaines Ave., Forest Park, Ill.
Surface Combustion Corp., 2375 Dorr St., Toledo 1, Ohio.
Sutton Corp., O. A., 1812 W. Second St., Wichita 2, Kans.
Swaine Mfg. Co., Fred J., 1300 N. Seventh St., St. Louis 6, Mo.
Swartwout Co., 18511 Euclid Av., Cleveland 12, Ohio.
Swett Bros., 78 Island Pond Rd., Springfield 8, Mass.
Swift Electric Welder Co., 8095 Livernois Ave., Detroit 4, Mich.
Swingfire Div., Devenco, Inc., 150 Broadway, New York, N. Y.
Swirling Oil Burner Mfg. Corp., 105-20 New York Blvd., Jamaica 33, N. Y.
Synchronous Flame, Inc., 327 S. LaSalle St., Chicago, Ill.
Syncromatic Corp., 1141 Tenth St., Watertown, Wis.
Syntron Co., 275 Lexington, Homer City, Pa.
Syracuse Alloy Metals Corp., 316-324 Pearl St., Syracuse 3, N. Y.

T

Tamms Industries, Inc., 228 N. LaSalle St., Chicago 1, Ill.
Tannewitz Works, 315 Front Av., N. W., Grand Rapids 2, Mich.
Taylor Instrument Companies, 95 Ames St., Rochester 1, N. Y.
Taylor-Winfield Corp., 1052 Mahoning Av., N. W., Warren, Ohio.
Technical Processes Div., Colonial Alloys Co., Ridge Av. & Crawford St., Philadelphia 29, Pa.
Techniflex Corp., Port Jervis, N. Y.
Tecumseh Products Co., Tecumseh, Mich.
Tele King Corp., 601 W. 26th St., New York, N. Y.
Telechron, Inc., Ashland, Mass.
Temco, Inc., 4104 Park Av., Nashville 9, Tenn.
Tempo Products Co., 2075 E. 65th St., Cleveland, O.
Temprite Products Corp., East Maple Rd., Birmingham, Mich.
Tennessee Coal & Iron Div., U. S. Steel Corp., Box 599, Fairfield, Ala.
Tennessee Products & Chemical Corp., American Natl. Bank Bldg., Nashville 3, Tenn.
Tenney Engineering Inc., 26 Avenue B, Newark 5, N. J.
Termite Drills, Inc., 99 N. Lotus St., Pasadena 8, Calif.
Tesco, Inc., 110 S. Norfolk, Tulsa, Okla.
Thatcher Furnace Co., Centre St., Garwood, N. J.
Therm Oil Burner Co., 2105 Westlake Ave., Seattle 1, Wash.
Thermac Co., 800 E. 108th St., Los Angeles 2, Calif.
Thermador Electrical Mfg. Co., Inc., 5119 District Blvd., Los Angeles 22, Calif.
Thermex Engineering Co., 400 N. Oakley Blvd., Chicago 12, Ill.
Therm-O-Blast Div., O'Halloran Inds., 12317 Turner Ave., Detroit 4, Mich.
Therm-O-Disc, Inc., 127 Crouse St., Mansfield, O.
Thermoid Co., Whitehead Rd., Trenton 6, N. J.
Thermomatic Corp., Church & Elm Sts., Willoughby, Ohio.
Thermo-Products, Inc., North Judson, Ind.
Therm-O-Wheel, Inc., 1040 B 22 St., Far Rockaway 91, N. Y.
Thompson Mfg. Co., A. F., 1040 Vernon St., Huntington, W. Va.
Thompson & Co., 1085 Allegheny Av., Oakmont, Pa.
Thomson Electric Welder Co., 161 Pleasant St., Lynn, Mass.
Thor Metal Products Co., Inc., Box 118, Eastwood Station, Syracuse 6, N. Y.
Thor Power Tool Co., Aurora, Ill.
Thor Tool & Die Co., 865 Estabrook St., San Leandro, Calif.
Tierney Rotor Ventilator Co., 239 4th Ave., S., Minneapolis, Minn.
Tiffin Art Metal Co., Box 807, Tiffin, Ohio.
Tiffin Eaves Trough Clamp Co., 25 Miami St., Tiffin, Ohio.
Time Saver Tools, Inc., Mundelein, Ill.
Timken Roller Bearing Co., The, 1835 Dueber Ave., S. W., Canton 6, Ohio.
Timken Silent Automatic Div., Timken-Detroit Axle Co., Jackson, Mich.
Tinit Mfg. Co., Inc., 1635-39 Platte St., Denver 2, Colo.
Tinnerman Products, Inc., Department No. 16, P. O. Box 6688, Cleveland 1, Ohio.
Titan Valve & Mfg. Co., 9913 Elk Av., Cleveland, Ohio.
Titeflex, Inc., 500 Frelinghuysen Av., Newark 5, N. J.
Titus, Inc., 1304 Broadway, Waterloo, Iowa.
Titus Mfg. Corp., 113 E. Eighth St., Waterloo, Iowa.
Tjernlund Mfg. Co., 2140 Kasota St., St. Paul 8, Minn.
Toch Bros., Inc., 2600 Richmond Ter., Staten Island 3, N. Y.
Toledo Heater Co., 25 S. St., Clair St., Toledo 4, Ohio.
Tool Industries, Inc., 15438 Telegraph Rd., Detroit, Mich.

Topflight Tool Co., 160 E. 9th Ave., York, Pa.
Toridheet Div., Cleveland Steel Products Corp., 15801 Brookpark Rd., Cleveland 11, O.
Torit Mfg. Co., 292 Walnut St., St. Paul 2, Minn.
Tork Clock Co., Inc., 1 Grove St., Mt. Vernon, N. Y.
Torq Electric Corp., 1002 Interstate St., Bedford, Ohio.
Torrington Mfg. Co., 70 Franklin St., Torrington, Conn.
Townsend Co., 206 River Rd., New Brighton, Pa.
Townsend Co., Cherry Rivet Div., Santa Ana, Calif.
Trade-Wind Motorfans, Inc., 5725 S. Main St., Los Angeles 37, Calif.
Trageser Copper Works, Inc., Maspeth, L. I., N. Y.
Trane Co., The, LaCrosse, Wis.
Tremont Nail Co., Box 111, Wareham, Mass.
Triad Products Corp., 5121 N. Clark St., Chicago 40, Ill.
Triangle Mfg. Co., 338 Division St., Oshkosh, Wis.
Trindl Products, Ltd., 17 E. 23rd St., Chicago 16, Ill.
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Tri-Saw Corp., 6611 Clayton Rd., St. Louis 17, Mo.
Tri-State Heating Supply Inc., 234-236 Murray St., Fort Wayne 5, Ind.
Tropic-Air Stoker Co., Box 256, Station A, Canton 5, Ohio.
Tropical Paint & Oil Co., 1244-86 W. 70th St., Cleveland, Ohio.
Trufio Fan Co., 523 Main St., Harmony, Pa.
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Tru-Mac Mfg. Co., 24 Woburn St., Reading, Mass.
Truscon Laboratories, Caniff & Grand Trunk R. R., Detroit 11, Mich.
Truscon Steel Div., Republic Steel Corp., Albert St., Youngstown 1, Ohio.
Tubular Rivet & Stud Co., Wollaston 70, Mass.
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U

Uehling Instrument Co., 473 Getty Av., Paterson 3, N. J.
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Utility Fan Corp., Div. of Utility Appliance Corp., 911 E. 59th St., Los Angeles 1, Calif.

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Vallas, Lionel, 2850 W. Lake St., Chicago 12, Ill.
Valley Electric Co., 4221 Forest Park, St. Louis, Mo.
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Van Noorden Co., E., 100 Magazine St., Boston 19, Mass.
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W

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Wallace Co., William, Metalbestos Div., Belmont, Calif.
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Wasco Flashing Co., 87 Fawcett St., Cambridge, Mass.
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Water Cooling Corp., 71 Nassau St., New York 38, N. Y.
Water Cooling Equipment Corp., 8601 New Hampshire Ave., St. Louis 23, Mo.
Water Cooling Tower Co., 5301 Cornell Ave., Chicago, Ill.
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Wa-Trol, P. O. Box 6366, Houston 6, Tex.
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Wayne Home Equipment Co., Inc., 801 Glasgow Av., Fort Wayne 4, Ind.
Weatherall Engineers, Inc., 387 Charles St., Providence 4, R. I.
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Webber Co., Inc., A. R., 424 Howard Ave., New Haven 11, Conn.
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Wedgelock Co., 5446 Satsuma Ave., North Hollywood, Calif.
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Western Engineering & Mfg. Co., 4114 Ocean Park Ave., Venice, Calif.
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Western Mineral Products Co., 1720 Madison St., N. E., Minneapolis 13, Minn.
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Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.
Westinghouse Electric Corp., Electric Appliance Div., 653 Page Blvd., Springfield 2, Mass.
Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.
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Wheelco Instruments Div., Barber-Colman Co., Rockford, Ill.
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Whirlaway Motors, Tippecanoe City, Ohio.
White-Rodgers Electric Co., 1209 Cass Ave., St. Louis 6, Mo.
Whiteley Bearing Corp., 1238 S. Ashland Ave., Chicago 8, Ill.
Whiting Corp., 157th St. & Lathrop Av., Harvey, Ill.
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Wickwire Spencer Steel Div., Colorado Fuel & Iron Corp., 575 Madison Ave., New York, N. Y.
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Will-Weld Mfg. Co., Inc., 1523 Marcy St., Omaha 2, Nebr.
Wilson & Co., Inc., 4100 S. Ashland Av., Chicago 9, Ill.
Wilson, Inc., Grant, 141 W. Jackson Blvd., Chicago 4, Ill.
Wilson, K. R., 215 Main St., Buffalo 3, N. Y.
Wilster, Inc., 5700 Detroit Av., Cleveland 2, Ohio.
Windmaster Corp., 43 W. Vine, Columbus, Ohio.
Wind-Way Fan & Ventilator Co., 527 St. Joseph St., New Orleans 12, La.
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Wise Furnace Co., South 21st St., Newark, Ohio
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Wolfe-Kote Co., 1225 N. 8th St., Sheboygan, Wis.
Wolff and Co., Benjamin, 1945 N. Cornell Ave., Melrose Park, Ill.
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Wood Steel Co., Alan, P. O. Box 112, Conshohocken, Pa.
Wood Co., John, Heater & Tank Div., Conshohocken, Pa.
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Woolley Engineering Co., 19956 James Couzens Hwy., Detroit 35, Mich.
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Worthington Corp., Harrison, N. J.
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Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa.
Wysong & Miles Co., 625 Fulton St., Greensboro, N. C.
Wyzenbeek & Staff, Inc., 223-235 N. California Av., Chicago, Ill.

X

XL Refrigerating Co., 1834 W. 59th St., Chicago 36, Ill.
X-Pando Corp., 43-15 36th St., Long Island City 1, N. Y.
XXth Century Heating & Ventilating Co., 96 Ira Av., Akron 1, Ohio.

Y

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Yeomans Bros. Co., 1999 N. Ruby St., Melrose Park, Ill.
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York Corrugating Co., Adams St. & W M RR., York, Pa.
York Corp., Roosevelt Av., York, Pa.
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Z

Zeh Co., Inc., 364 Highland Av., Passaic, N. J.
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Zeigler-Harris Co., 2900 N. San Fernando Rd., Burbank, Calif.
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Zick Sheet Metal Works, 25150 W. Warren Ave., Dearborn, Mich.
Zink Co., John, 4401 S. Peoria St., Tulsa 1, Okla.
Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.

INDEX TO ADVERTISERS

A

A & A Register Co., The 264
A-J Mfg. Co. 197
A-P Controls Corp. 218, 219
Accurate Sheet Metal & Mfg. Works .. 278
Adams Co., The 273
Adams Mfg. Co. 198
Adelta Mfg. Co., Inc. 7
Advance Furnace Co. 185
Aerofin Corp. 258
Air Controls, Inc., Div. of the Cleveland Heater Co. 190
Air Control Products Inc. Inside Front Cover
Air Devices, Inc. 230, 231
Air Filter Corp. 262
Airtemp Div., Chrysler Corp. 156
Ajax Furnace Fitting Co., Div. Cincinnati Sheet Metal & Roofing Co. 270
Allegheny Ludlum Steel Corp. ..... *
Allen Co., Inc., L. B. 238
Allen Vent. Div., Production Planning Co. 265
Alton Mfg. Co. 253
American Air Filter Co., Inc. 48, 163
American Brass Co., The 200
American Furnace Co. 188
American Metal Products Co. Inc. ..... *
American Radiator & Standard Sanitary Corp. 52, 53
Anchor Div., Stratton and Terstegge ... *
Anchor Post Products, Inc., Fluid Heat Div. ..... *
Anemostat Corp. of America 43
Armco Steel Corp. ..... *
Armstrong Co., The ..... *
Armstrong Furnace Co. 80
Atlas Mfg. Co. 221
Auer Register Co., The 212
Auto-Flo Corp. ..... *
Automatic Humidifier Co. 186, 187

B

Bacharach Industrial Instrument Co. .. 272
Barber-Colman Co. 56, 57
Bard Mfg. Co. ..... *
Barth Eng. Co. ..... *
Beckett Corp., R. W. 250
Berger Bros. Co. 276
Besser Metal Products Corp. 260
Bethlehem Steel Co. 83
Bett-Marr Manufacturing Co. 199
Beverly Shear Mfg. Co. 253
Birks Mfg. Co. 278
Bishop & Babcock Mfg. Co., The .... *
Boston Machine Works Co. 267
Brandes Company 180
Brauer Supply Co., A. G. 136
Bremil Mfg. Co. ..... *
Brundage Co. 120
Bryant Corp., C. L. ..... *
Bryant Heater Div., Affiliated Gas Equipment, Inc. ..... *
Burdett Mfg. Co. 277
Burt Mfg. Co., The ..... *

C

Cam-Stat, Inc. 50, 51
Carnes Co., W. R. 223
Carrier Corp., ... Outside Back Cover
Central-West Machinery Co. 279
Century Electric Co. 179
Century Engineering Corp. ..... *
Champion Furnace Pipe Co. 5
Char-Gale Mfg. Co. 173, 174, 175, 176
Chase Brass & Copper Co. 144
Chemold Co. 272
Cheney Flashing Co. ..... *
Chevrolet Motor Div., General Motors Corp. 178
Cincinnati Elbow Co., The 256
Cincinnati Shaper Co., The 26
Circulataire Div., Corlett-Turner Co. .. *
Clarage Fan Co. 66, 67
Clayton & Lambert Mfg Co. 225
Cleveland Humidifier Co., The 251
Cole Hot Blast Mfg. Co. ..... *
Coleman Co., Inc., The 154, 155
Condensation Engineering Corp. 8
Continental Steel Corp. 215
Connor Engrg. Corp. ..... *
Coogan Co., Frank J. ..... *
Cook Co., Loren ..... *
Corbman Bros., Inc. 27
Corlett-Turner Co. 265
Cox Mfg. Co. 261
Crescent Tool Co. 172
Crise Controls Div., Acro Mfg. Co. 216, 222
Crucible Steel Co. of America 211
Curtis Refrigerating Machine Div. of Curtis Mfg. Co. 132

D

Daffin Mfg. Co. ..... *
Dahlstrom Machine Works, Inc. 267
Damp-Vent Co. ..... *
Day Co., The ..... *
Delco Appliance Div., General Motors Corp. 168
Delco Products Div., General Motors Corp. 41
Delta Heating Corp. 133
Detroit Controls Corp. 131
Diamond Mfg. Co. 275
Dieckman Co., Ferdinand, The 229
Dole Valve Co. ..... *
Doyle Vacuum Cleaner Co. 270, 279
Dreis & Krump Mfg. Co. 159, 265, 271
Duo-Therm Div. of Motor Wheel Corp. .. *
Duro-Dyne Corp. 234

E

Elgen Mfg. Corp. 232, 233
Elgo Shutter & Mfg. Co. 245
Emerson Elec. Mfg. Co., The 33
Excelsior Steel Furnace Co., The 240

F

Fallsington Mfg. Co. 254
Famous Furnace Co., The 243
Federated Metals Division ..... *
Field Control Div. of H. D. Conkey & Co. 266
Fireline Stove & Furnace Lining Co. .. *
Firewel Co., Inc., The 263
Follansbee Steel Corp. ..... *
Fresh'nd-Aire Co., Div. of Cory Corp. .. 129
Frey & Co., Frank P. 279

G

Galvan Mfg. Co. ..... *
General Automatic Products Corp. 251
General Controls Co. ..... *
General Electric Co. 123
General Filters, Inc. 224
General Products Co. 127
Gerett Corp., M. A. 169
Gilbert & Barker Mfg. Co. 164, 165
Glasby Mfg. Co., Inc., J. P. 276
Glasfloss 208
Glass Fibers, Inc. ..... *
Glycolator Div., Iron City Chem. Co. .. 241
Gray Metal Products, Inc. 217
Greenheck Bros. Mfg. Co. 276
Gustin-Bacon Mfg. Co. 47

H

Hallmor Inc. 273
Hall-Neal Furnace Co. 54, 55
Hammel Radiator Engrg. Co. 42
Hart & Cooley Mfg. Co. 24, 25
Heil Co., The 76
Henry Furnace Co., The 62, 63
Homease Products Co. ..... *
Hussey & Co., C. O. 161

I

Illinois Bronze Powder Co. 265
Illinois Testing Laboratories, Inc. .... *
Independent Register Co., The 236
Ingersoll Steel Div., Borg-Warner Corp. *
Inland Steel Products Co. 30
Insto-Gas Corp. 270
Insulating Castable Corp. 263
International Heater Co. 58, 59
International Nickel Co., The ..... *
Iron Fireman Mfg. Co. ..... *

J

Jackson & Church Co. ..... *
Janitrol Div. Surface Combustion Corp. 194, 195
Jettronaire, Inc. 170
Johns-Manville ..... *
Johnson Gas Appliance Co. ..... *
Johnson Ladder Shoe Co. 278
Juniper Elbow Co., Inc. 279

K

Kaustine Furnace & Tank Corp. ..... *
Kent Company, Inc., The ..... *
Kirk & Blum Mfg. Co., The 274
Ko-Z-Aire Products, Inc. ..... *
Kraus Mfg. Co., Charles E. ..... *
Krueger Air Conditioning Co. ..... *
Krueger Sentry Gauge Co. 6

L

Lake Chemical Co. 263
Lau Blower Co., The ..... *
Lennox Furnace Co. ..... *
Levow, David 269
Lexington Supply Co. ..... *
Libert Machine Co. 268
Lima Register Company 151
Little Giant Vaporizer Co. 264
Livingston, Inc. 277
Lockformer Co., The 9, 13

M

Made-Rite Co., Inc. ..... *
Maid-O'-Mist, Inc. 153
Majestic Co., Inc., The 210
Marshalltown Mfg. Co. 269
Maxitrol Co. 245
Mayflower Air-Conditioners, Inc. 177
McLarty Systems 275
Melaway Corp. 266
Metal Wool Div. of Carey Electronic Eng. Co. 21
Metromatic Mfg. Co. ..... *
Meyer & Bro. Co., F. 18
Meyer Furnace Co., The ..... *
Midco Register Corp. ..... *
Mid-Continent Metal Products Co. .... *
Miller & Doing 275
Miller Electric Mfg. Co. ..... *
Milton Equipment Co. 276
Milwaukee Electric Tool Corp. ..... *
Milwaukee Gas Specialty Co. ..... *
Mine Safety Appliances Co. 269
Minneapolis-Honeywell Regulator Co. . 36, 37
M-M-A. Inc. 247
Modern Materials Co. 271
Modine Mfg. Co. 205
Morey, Dan 226
Morrison Products, Inc. 82
Morrison Steel Products, Inc. ..... *
Morse-Smith-Morse Co., The 204
Mueller Climatrol 182, 183

N

National Engineering & Mfg. Co. 247
National Lock Company 248
National Metal Fabricators 271
National Super Service Co., Inc. 274
Niagara Furnace Div., Forest City Foundries Co., The 78
Niagara Machine & Tool Works 70
Nu-Way Corp. 44

O

Obdyke, Inc., Benjamin P. 271
Ohio Valley Hardware & Roofing Co. .. 228
Oil Equipment Mfg. Corp. 243
Olsen Mfg. Co., C. A., The 34, 35
O'Neil-Irwin Mfg. Co. 280
Oran Co., Inc. ..... *
Owens-Corning Fiberglas Corp. ..... *
Owens Co., H. ..... *

P

Packard Elec. Div., General Motors Corp. 68
Palmer Mfg. Corp. 209
Parker-Kalon Div., General American Transportation Corp. 73, 265, 267
Patco Mfg. Co. 252
Patten Co., J. V. 201
Payne Furnace Div., Affiliated Gas Equipment, Inc. ..... *
Peck, Stow & Wilcox Co., The 134
Peerless Electric Co., The 148, 149
Penn Controls, Inc. 22
Penn Ventilator Co. 261
Perfection Stove Co. 192
Petersen Mfg. Co. ..... *
Petro ..... *
Portable Electric Tools, Inc. ..... *

Q

Quickdraft Co., Div., Hall's Safe Co., The 181
Quiet Automatic Burner Corp. 274
Quincy Stove Mfg. Co., The ..... *

R

R C S Tool Sales Corp. ..... *
Radiant Utilities Corp. ..... *
Ralph Mfg. Co., Inc. 259
Randall Graphite Bearings, Inc. 242
Redmond Distributors, Inc. 237
Reiner & Campbell Co., Inc. 278
Remington Arms Co., Inc. 135
Republic Steel Corp. 81
Revere Copper & Brass, Inc. 115
Reynolds Metals Co. 184
Reznor Mfg. Co. 241
Rheem Mfg. Co. 71, 166, 167
Richmond Radiator Co. 28, 29
Roberts-Gordon Appliance Co. ..... *
Rochester Mfg. Co., Inc. ..... *
Rock Island Register Co. 46
Royal Jet, Inc. 10
Ruby Chemical Co. 276
Ryerson & Son, Inc., Jos. T. 84

S

St. Clair Metal Products ..... *
Sall Mountain Co., The ..... *
San Angelo Foundry & Machine Co. .. 260
Schaefer Brush Mfg. Co. 268
Schwab Furnace Co. 274
Scully Signal Co. 239
Sequoia Mfg. Co. 72
Siemon Mfg. Co. ..... *
Skil Corp. ..... *
Skuttle Mfg. Co. 227
Smith, R. E. 268
Southwest Mfg. Co. ..... *
Sonoco Products Co. 126
Standard Heating Equipment Co. ..... *
Standard Stamping & Perforating Co. .. 171
Steinen Mfg. Co., Wm. ..... *
Stewart-Warner Corp., U. S. Machine Div. ..... *
Stic-Klip Mfg. Co. ..... *
Stueck, Inc., W. Whitney 275
Sunbeam Air Conditioner Div., American Radiator & Standard Sanitary Corp. 52, 53
Sundstrand Engrg. Co. 12
Sundstrand Machine Tool Co., Hydraulic Div. 3
Sun-Ray Burner Mfg. Corp. 189
Superior Furnace & Mfg. Co. 229
Surface Combustion Corp. 194, 195
Superior Metal Fabricating Co. ..... *
Swartwout Co., The 262
Swett Bros. 239
Syncromatic Corp. 19, 20

T

Tecumseh Products Co. 193
Thatcher Furnace Co. 191
Thermac Company 220
Thermo-Base Div., Gerwin Industries, Inc. ..... *
Thompson & Co. 256
Thor Metal Products Co., Inc. 269
Thor Tool & Die Co. 275
Timken Silent Auto. Div., Timken-Detroit Axle Co., The ..... *
Tinit Mfg. Co., Inc. 275
Titus Inc. 137, 138, 139, 140
Toridheet Div., Cleveland Steel Products Corp. ..... *
Trade-Wind Motor Fans, Inc. ..... *
Triangle Mfg. Co. 258
Turner Brass Works, The 235
Tuttle & Bailey, Inc. ..... *
Typhoon Air Conditioning Inc. 69

U

Union Asbestos & Rubber Co. ..... *
United States Register Co. 116, 117
United States Steel Corp. 23
U. S. Steel Supply Div., United States Steel Corp. ..... *
Utility Appliance Corp. 45

V

Van Packer Corp. 14, 15
Velocity Power Tool Co. 269
Viking Air Conditioning Corp. 49
Vyke Brake Co. 278

W

Wales-Strippit Corp. 77
Walker Mfg. & Sales Corp. 214
Walton Laboratories Inc. 246
Ward Machinery Co. ..... *
Washington Steel Corp. 79
Waterman-Waterbury Co., The 16, 17
Wayne Home Eqpt. Co. 75
Webster Elec. Co. ..... *
Westinghouse Electric Corp., Sturtevant Div. 74
Wheeling Corrugating Co. 11
White-Rodgers Elec. Co. ..... *
Whitney Mfg. Co., W. A. 196
Whitney Metal Tool Co. 272
Wilder Mfg. ..... *
Wilkoff Co. Inc., David L. ..... *
Williams Division, Eureka Williams Corp. 143
Williamson Heater Co., The 64, 65
William Wallace Co. 244
Willis Steel Corp. 279
Wilson & Co., Inc. ..... *
Wilson, Inc., Grant ..... *
Windmaster Corp. 147
Wisconsin Oil Burner Co. 237
Wiss & Sons Co., J. ..... *
Wodack Electric Tool Corp. ..... *
Wolff & Co., Benjamin ..... Inside Back Cover
Wood Co., John 60, 61
Wysong & Miles Co. ..... *

Y

Yorktowne Machine Co. 235

Z

Zink Co., John 38

Firms represented in this issue are identified by the folio of the page on which their advertising appears. Advertising which appears in other issues is marked with an asterisk.

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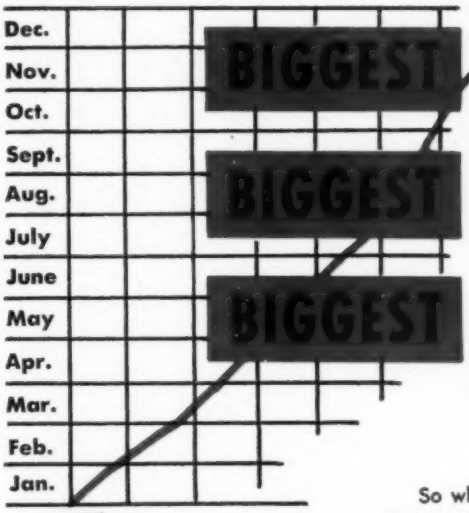
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